

FIG. 1

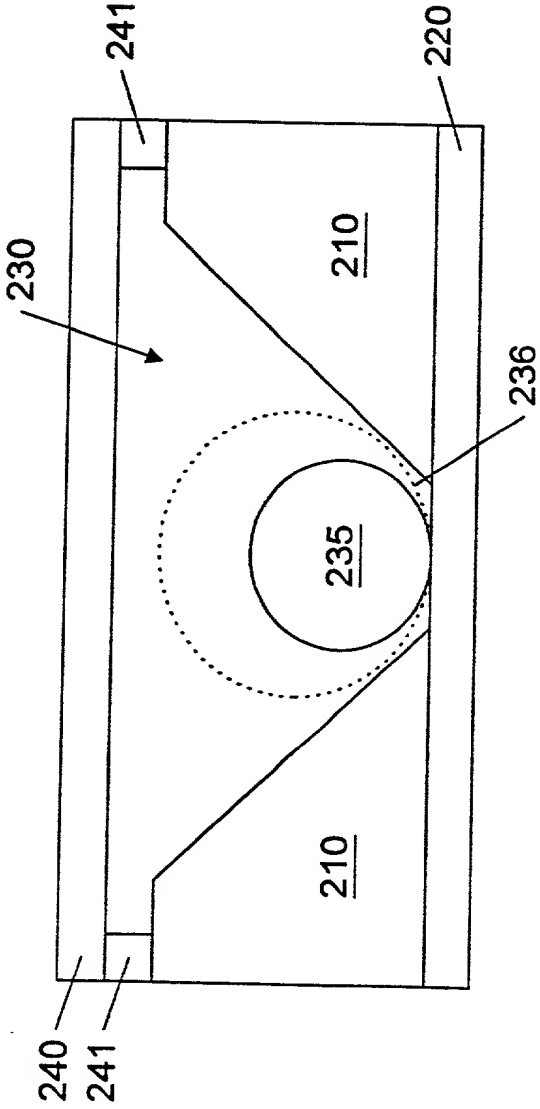


FIG. 2

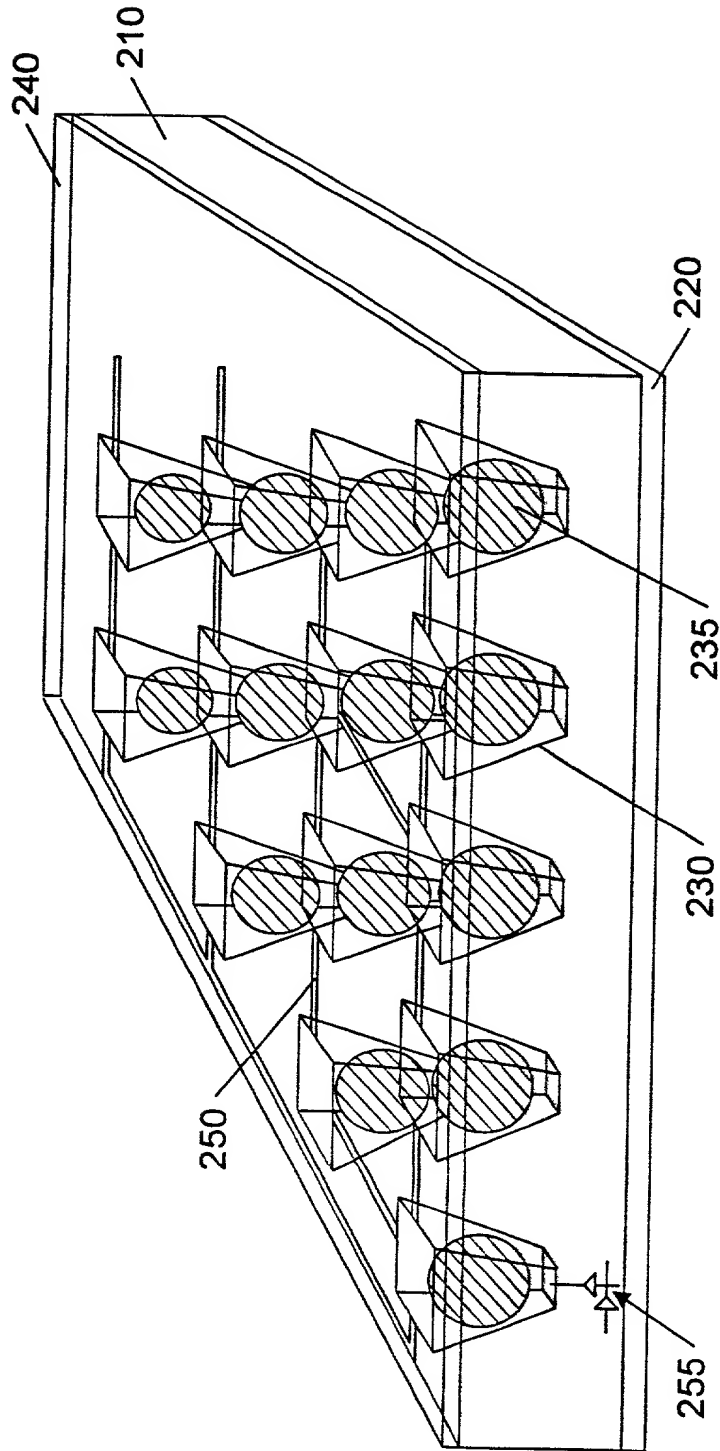


FIG. 3

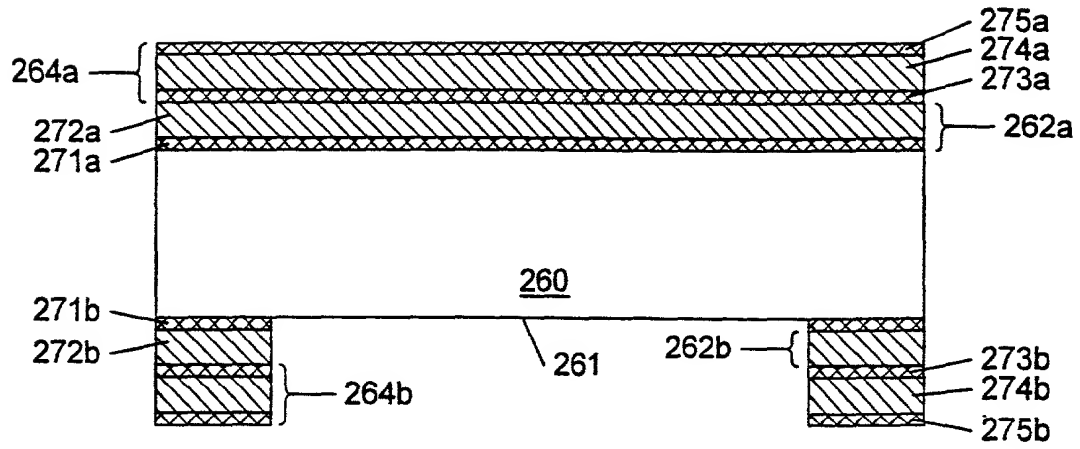


FIG. 4A

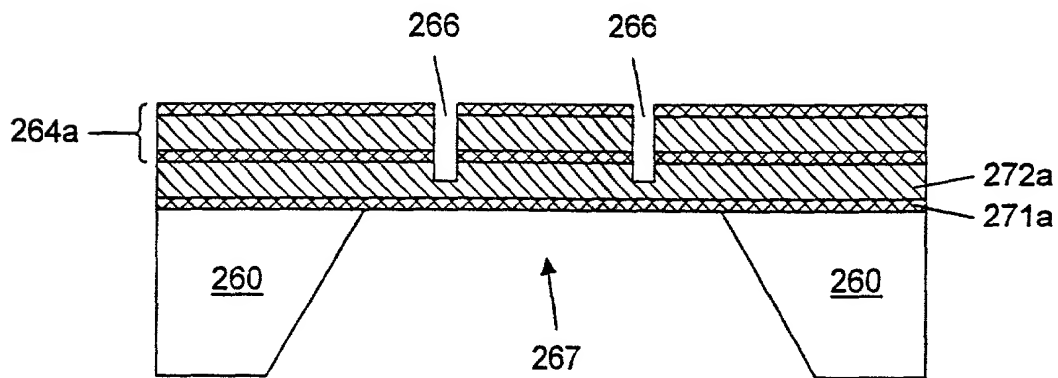


FIG. 4B

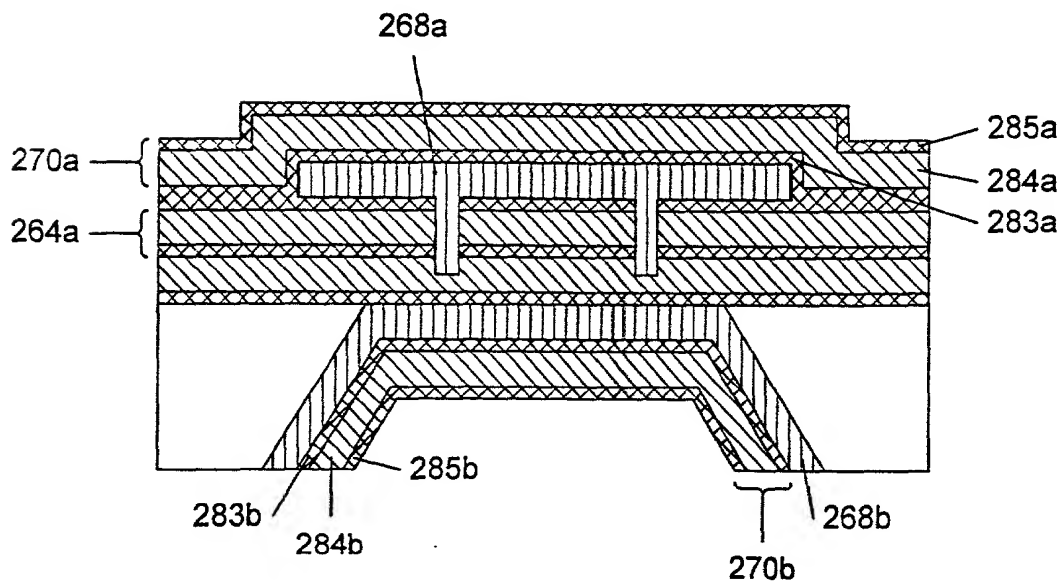


FIG. 4C

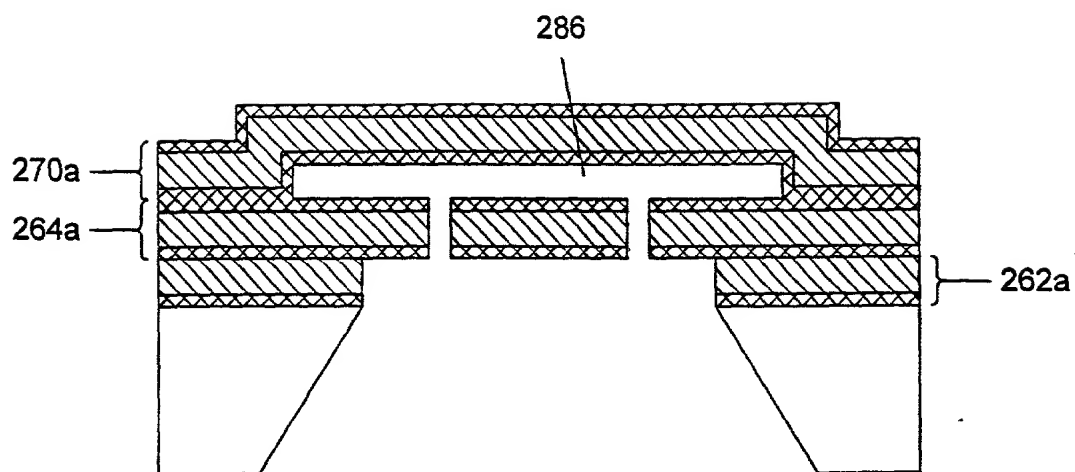


FIG. 4D

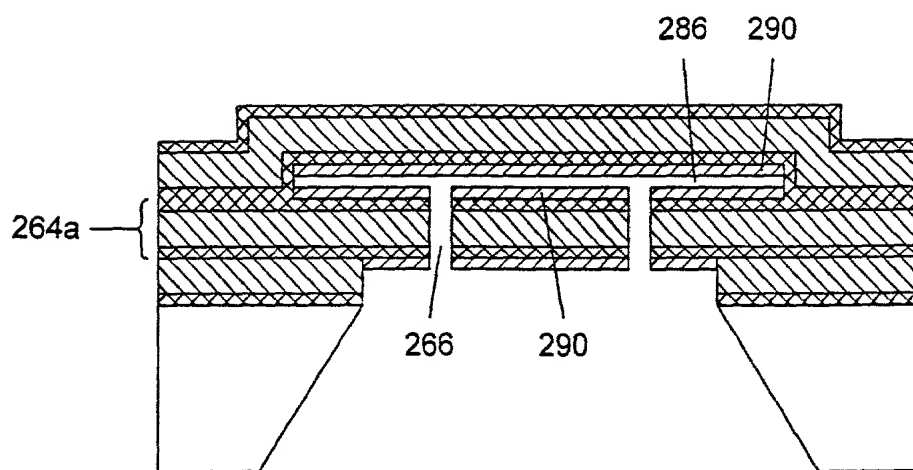


FIG. 4E

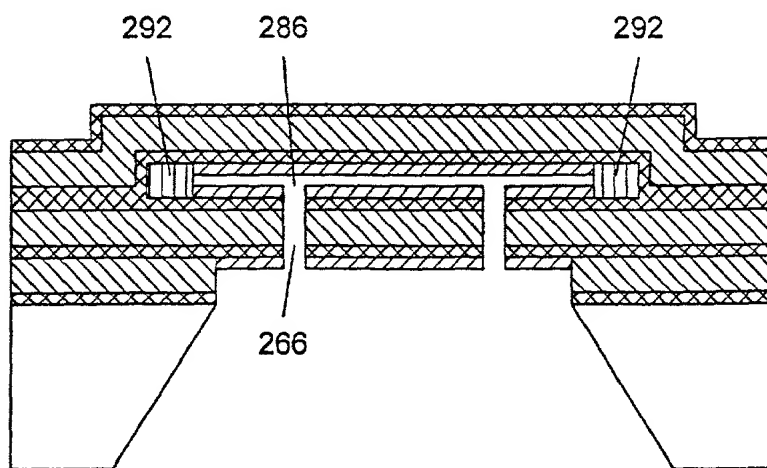


FIG. 4F

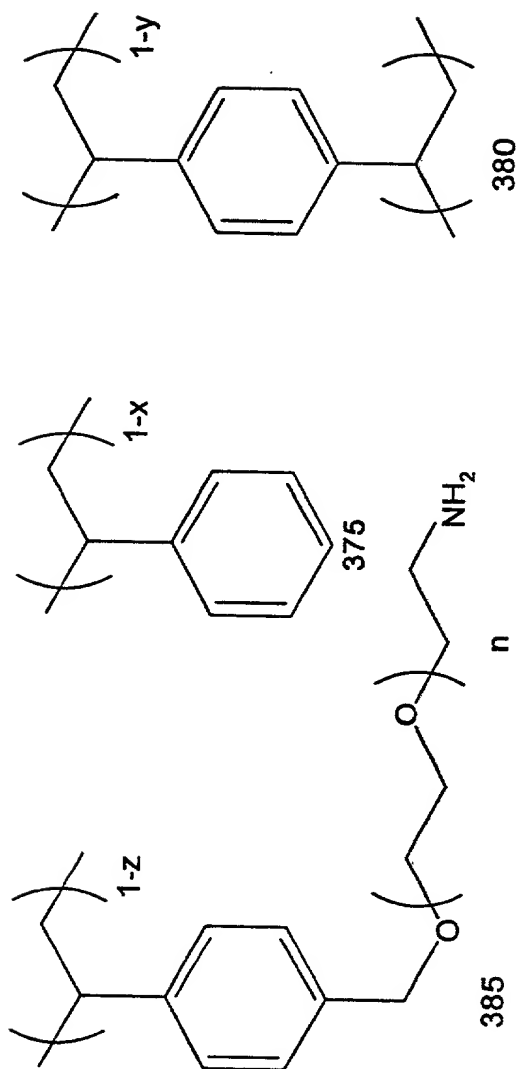


FIG. 5

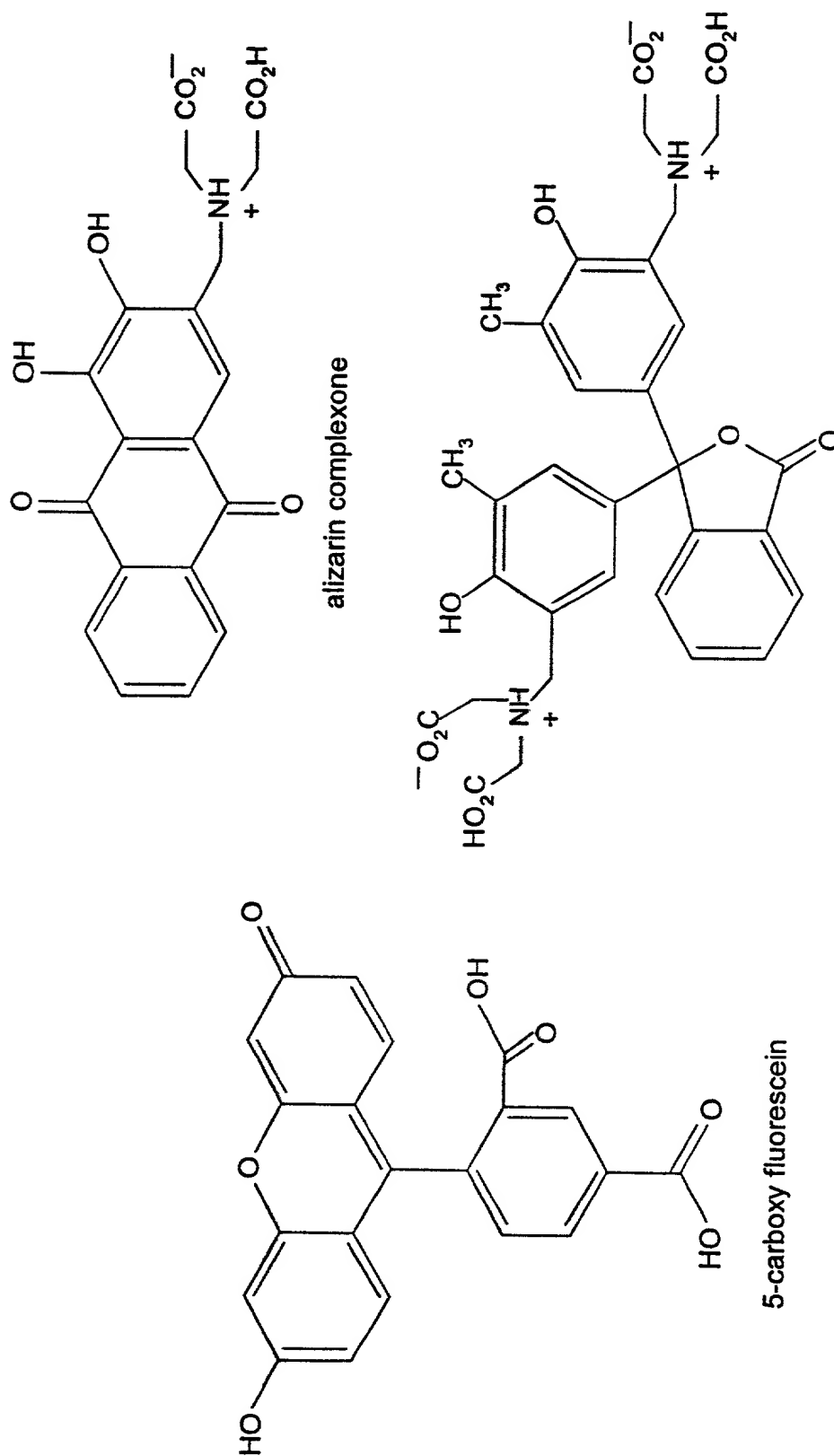


FIG. 6

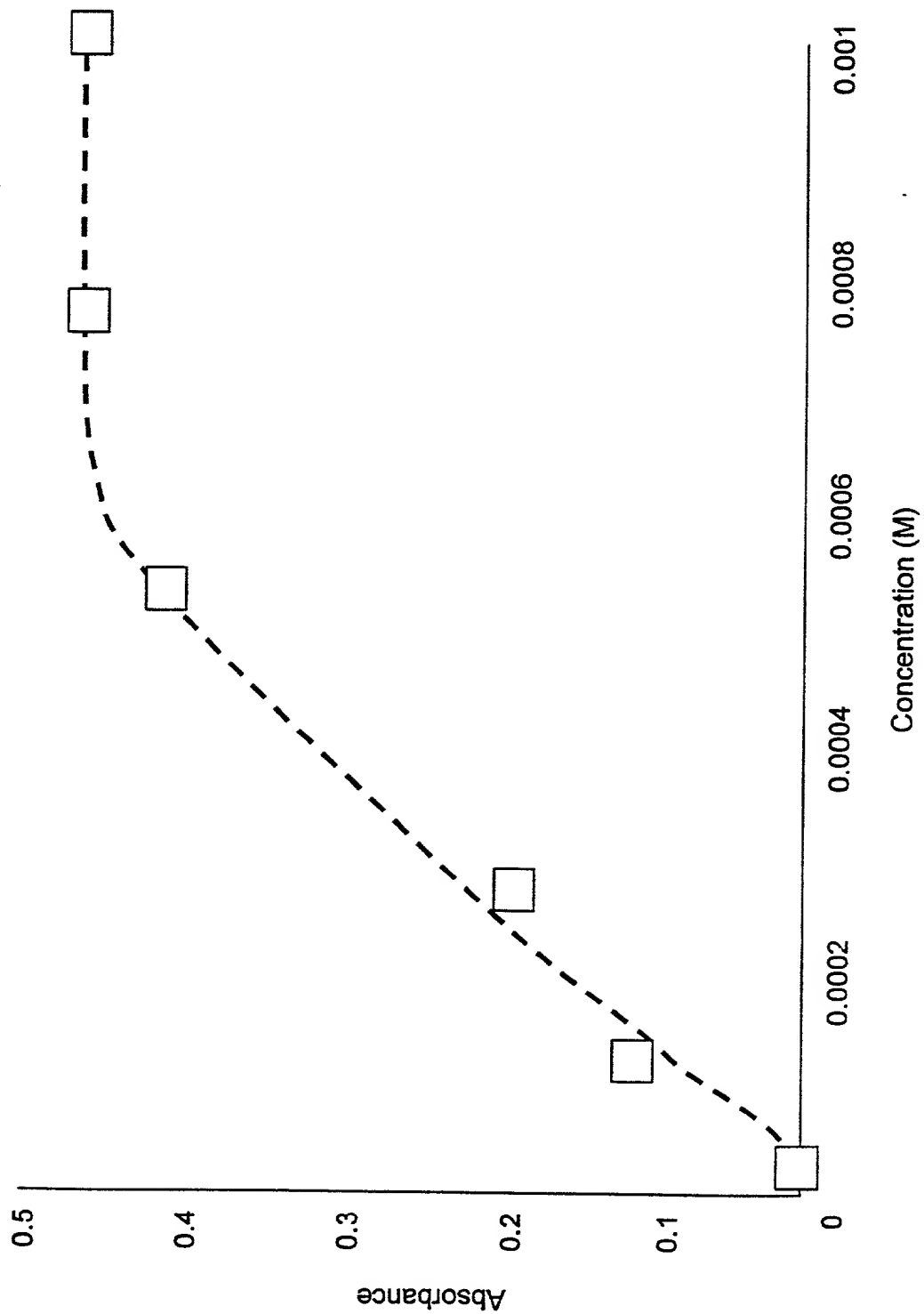


FIG. 7



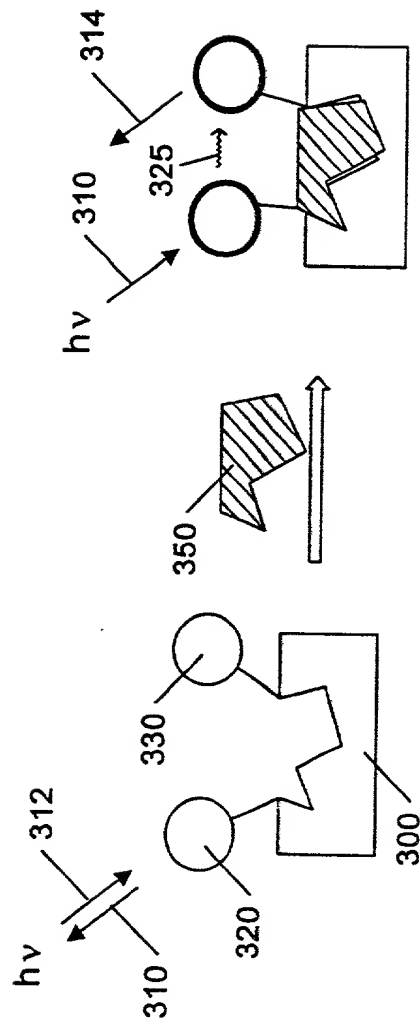


FIG. 8

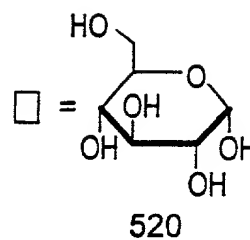
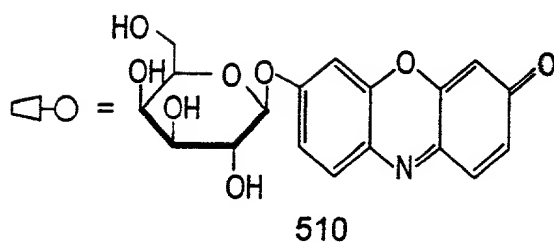
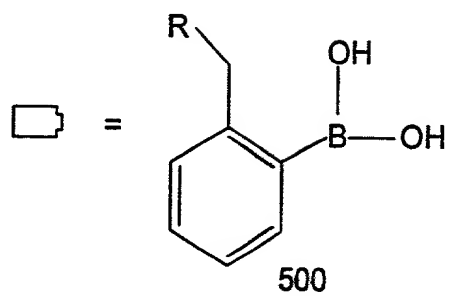
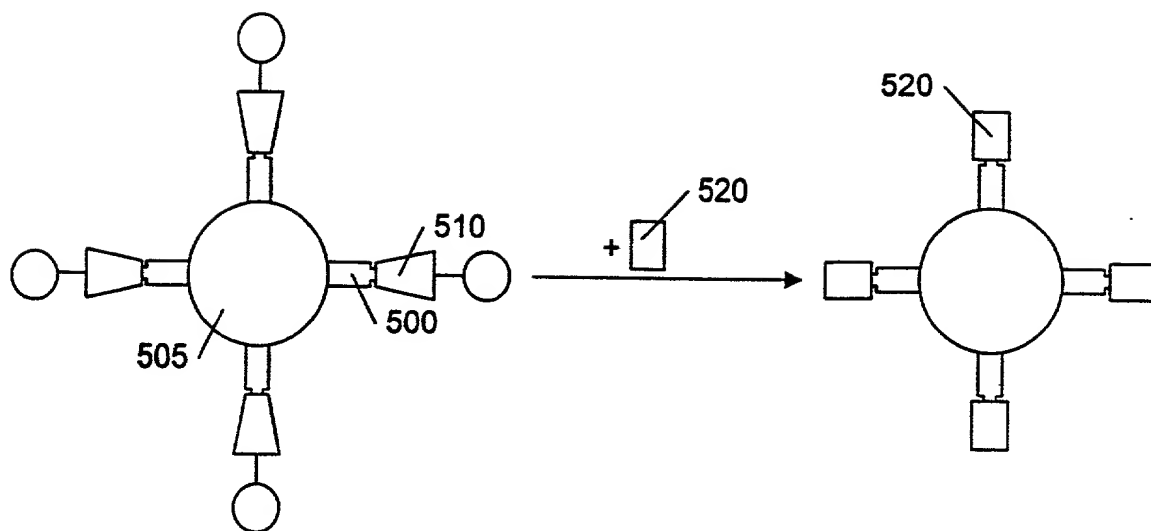
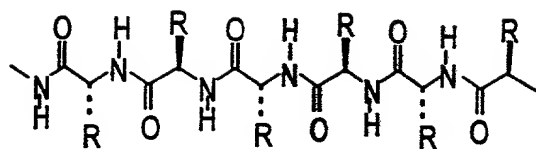
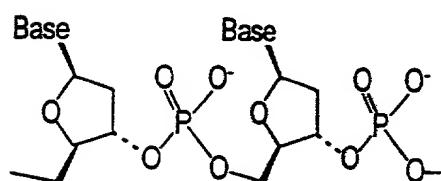


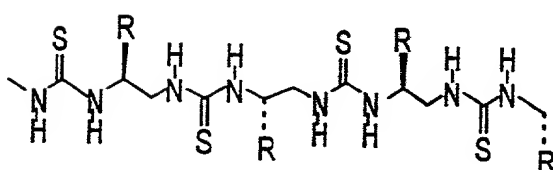
FIG. 9



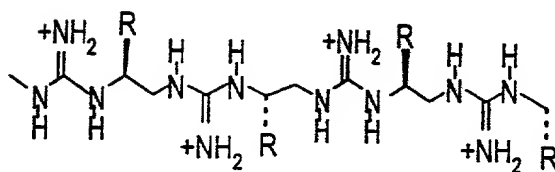
Peptides



Nucleotides



Polythioureas



Polyguanidiniums

FIG. 10

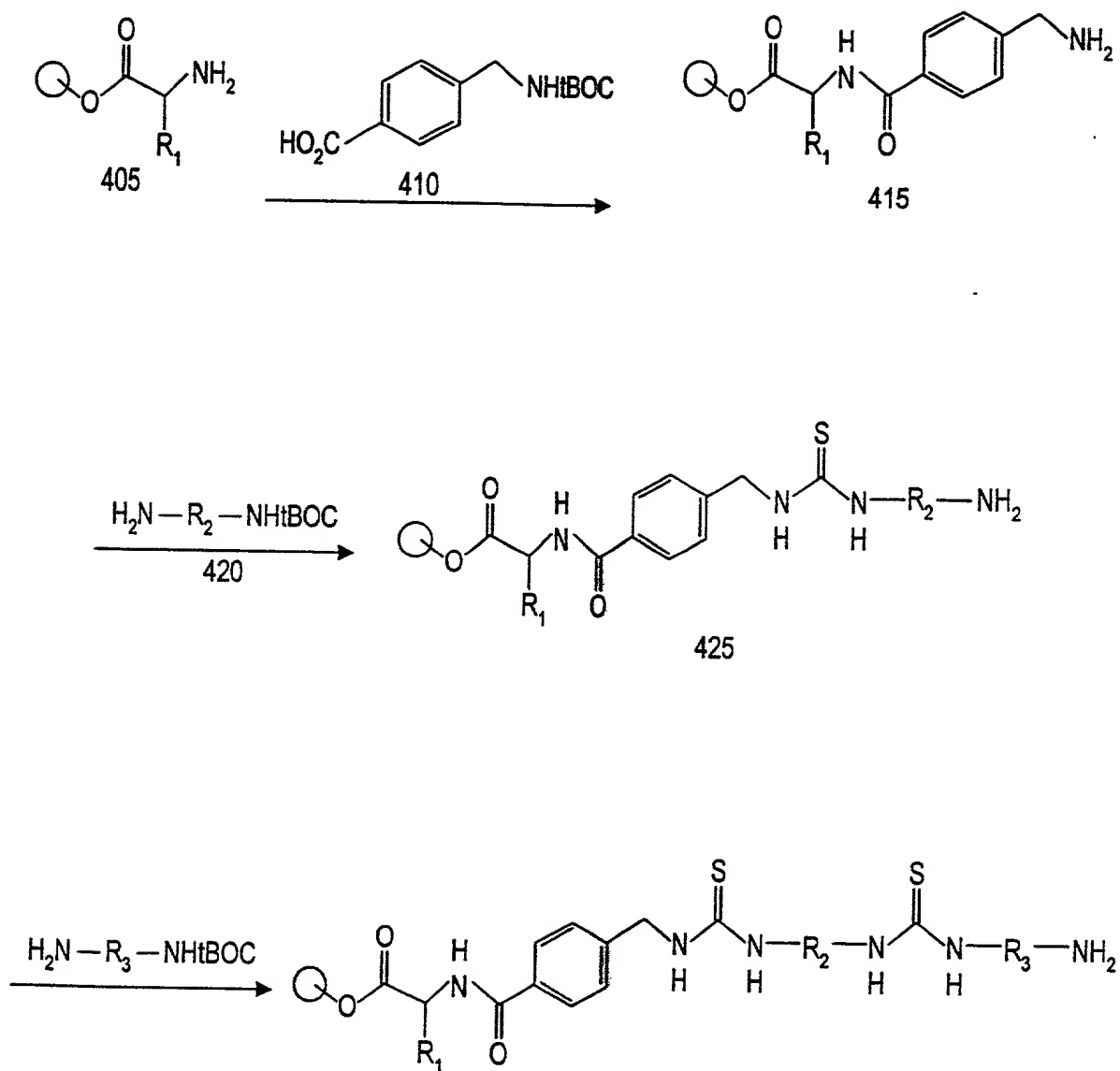


FIG. 11

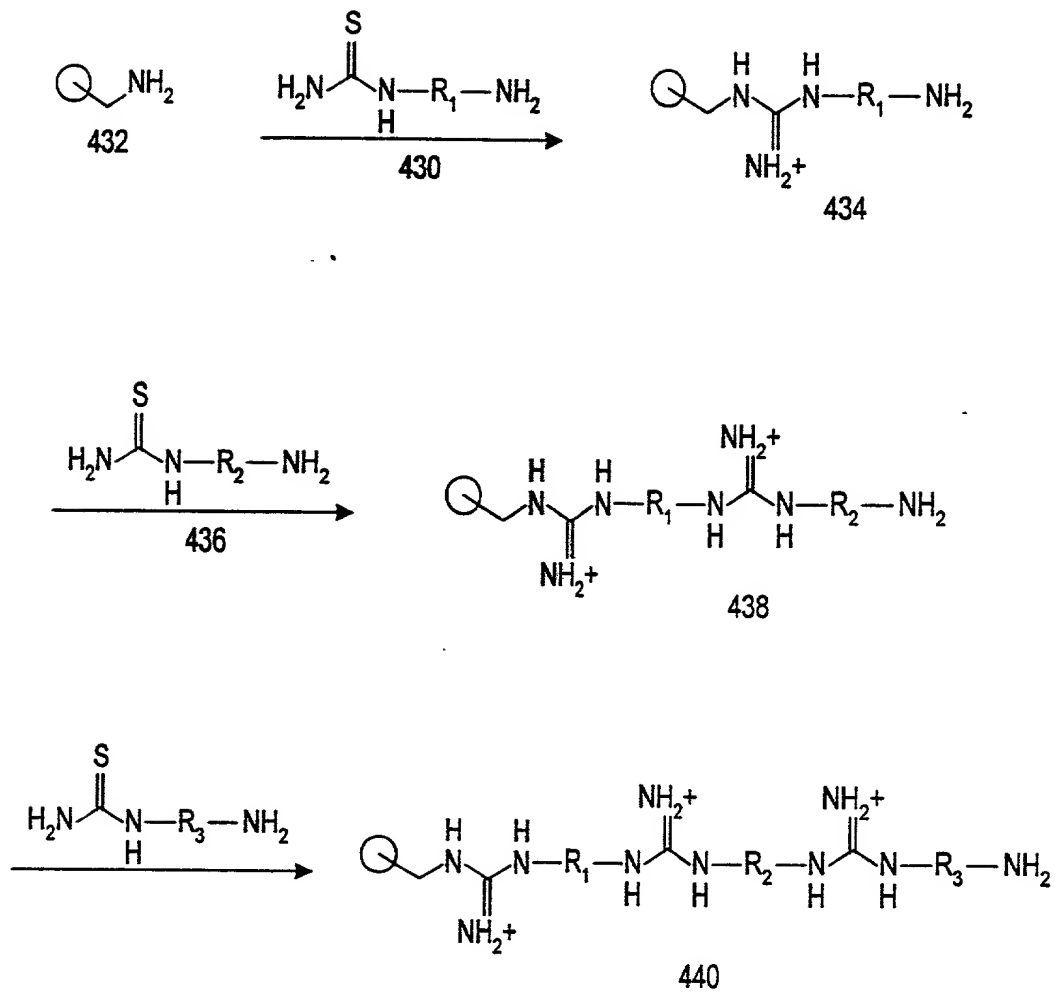


FIG. 12

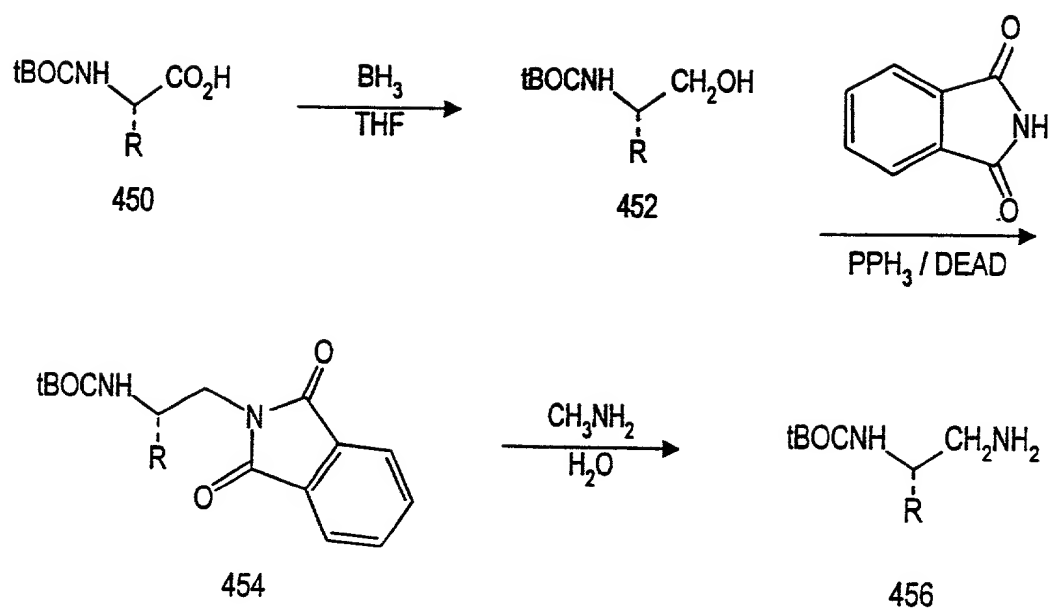


FIG. 13

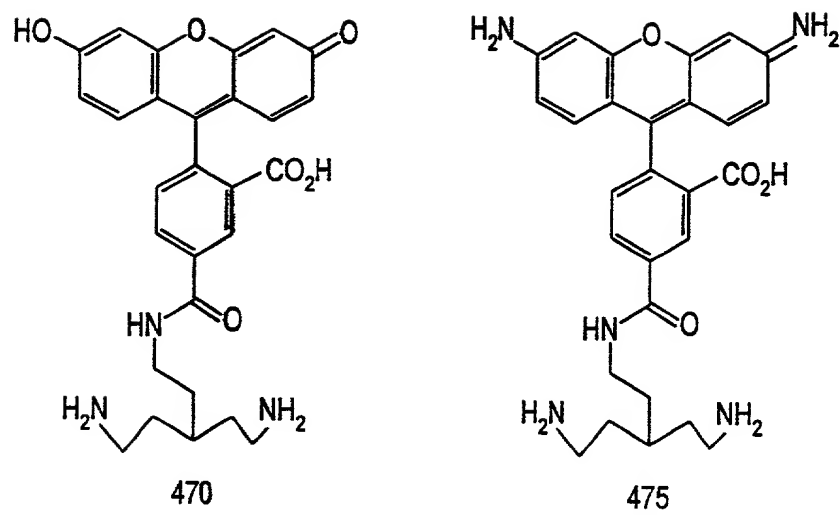


FIG. 14

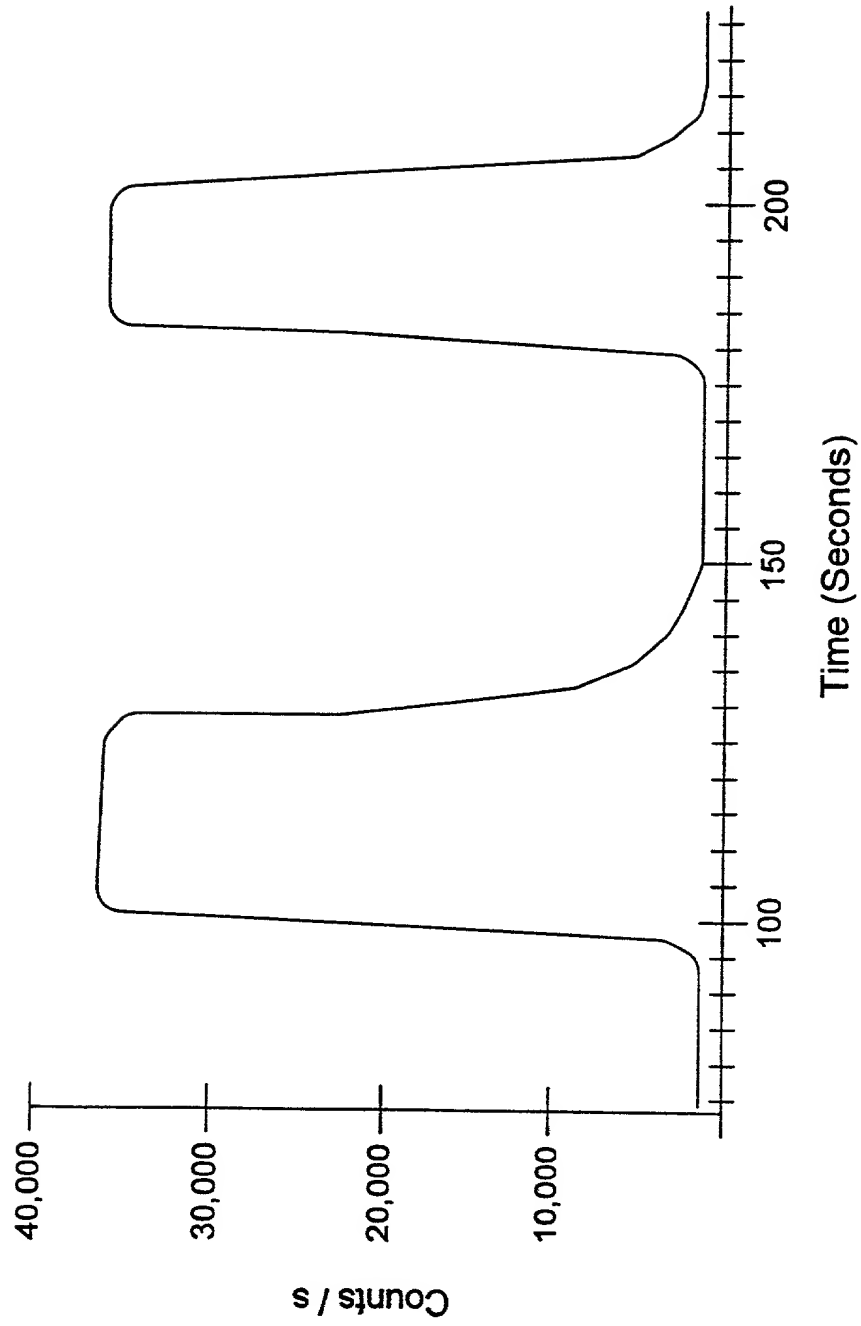


FIG. 15



RESIN: pH      Ion		Blank	Alizarin	o-Cresol- phthalein	Fluorescein	Alizarin-Ce <sup>3+</sup> complex
2	none					
2	Ca <sup>2+</sup>					
7	none					
7	Ca <sup>2+</sup>					
7	F <sup>-</sup>					
12	none					
12	Ca <sup>2+</sup>					
12	F <sup>-</sup>					

FIG. 16

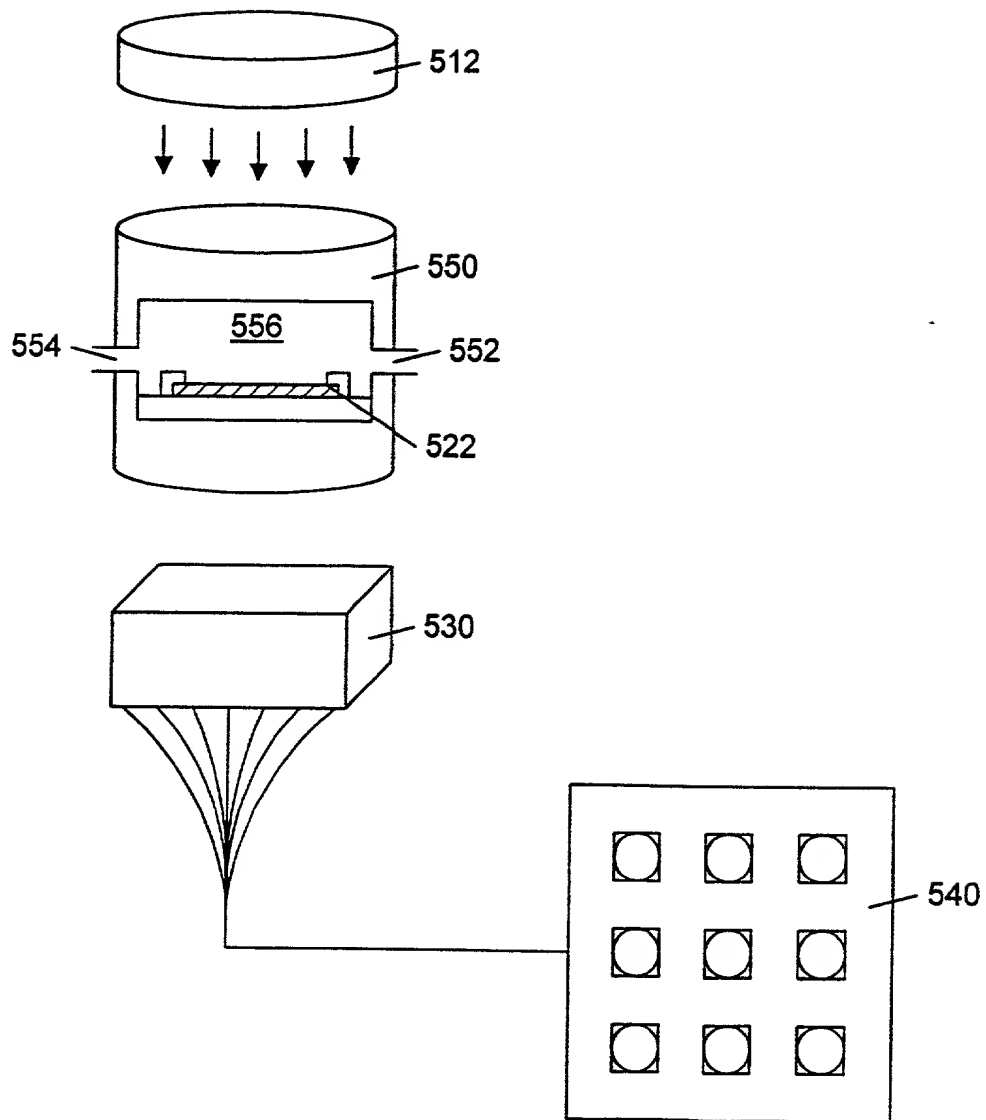


FIG. 17

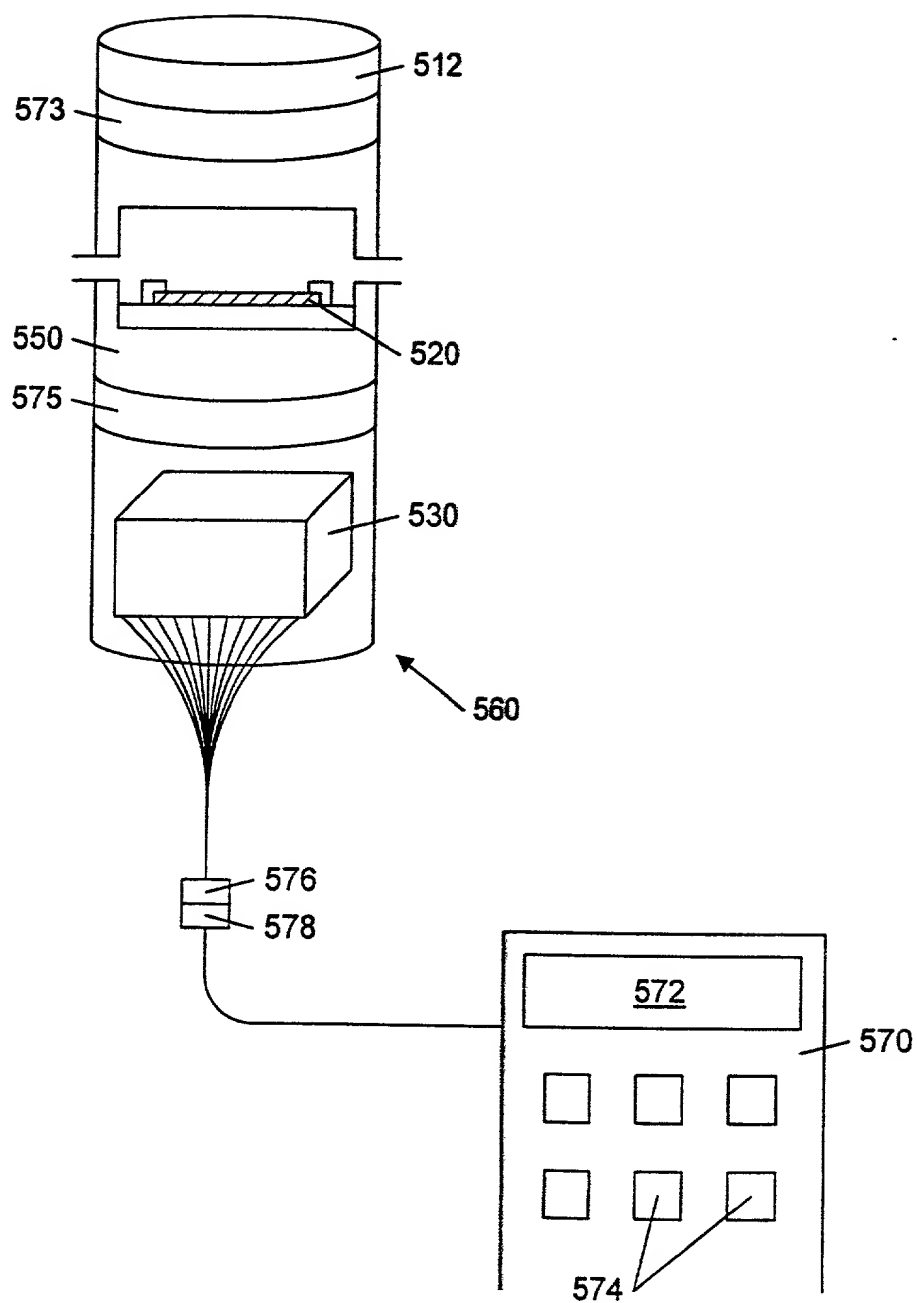


FIG. 18

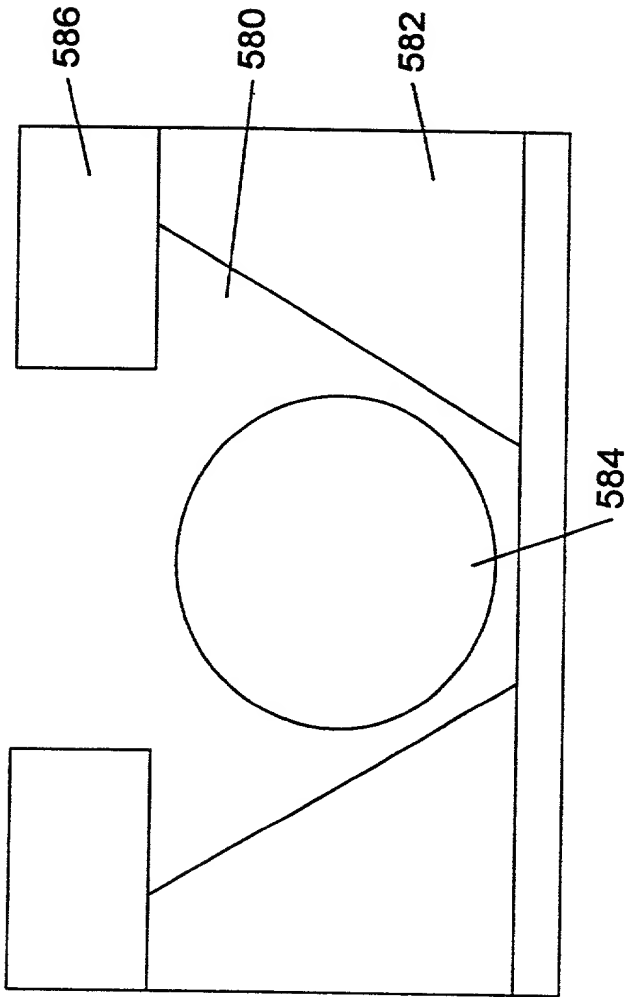


FIG. 19

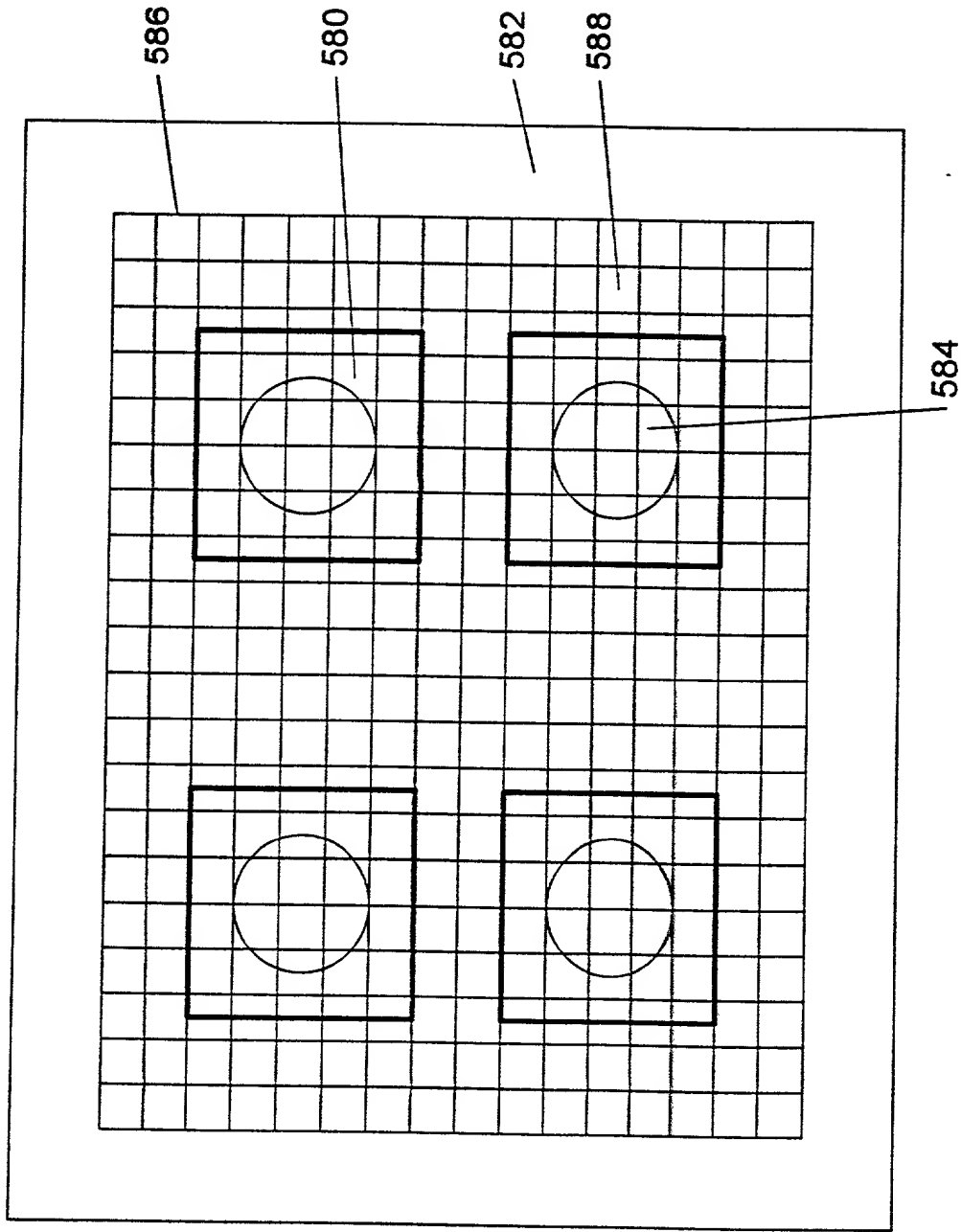


FIG. 20

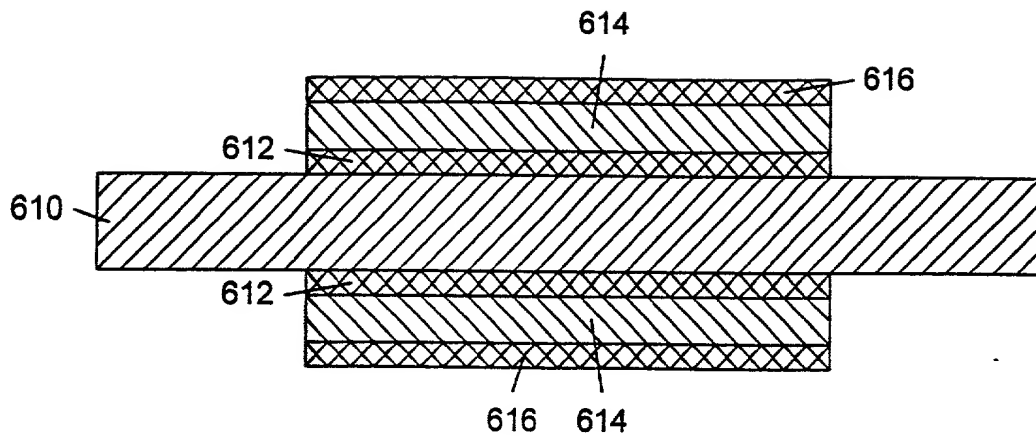


FIG. 21A

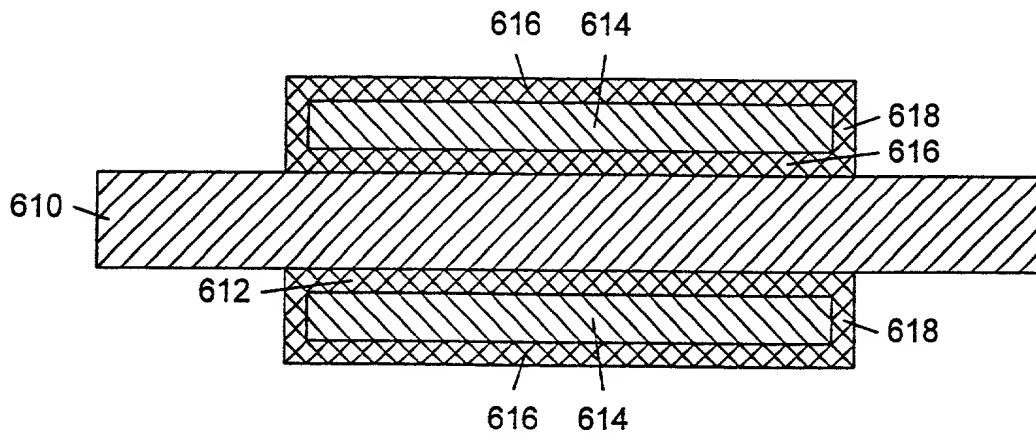


FIG. 21B

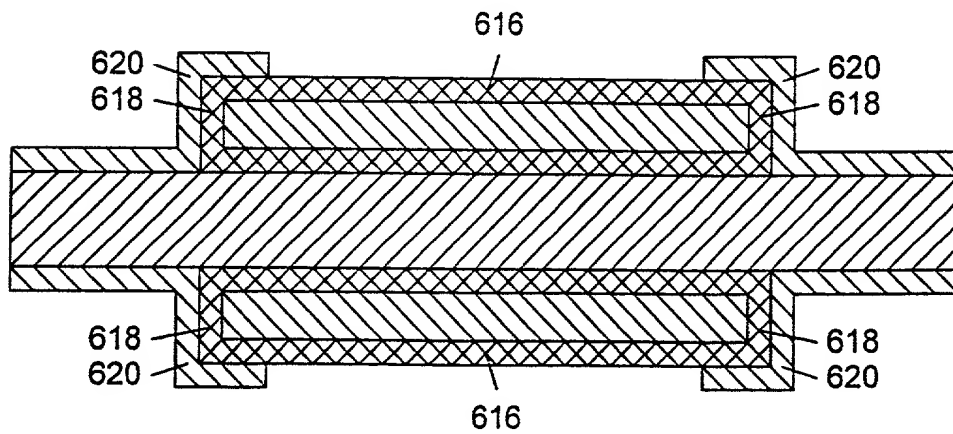


FIG. 21C

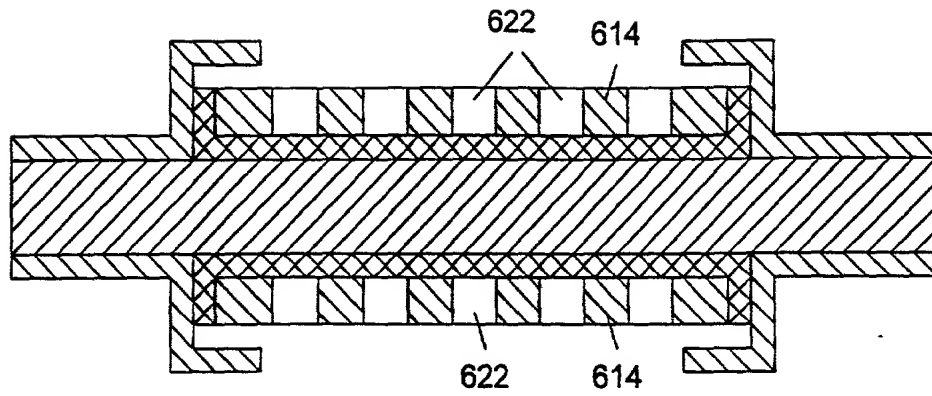


FIG. 21D

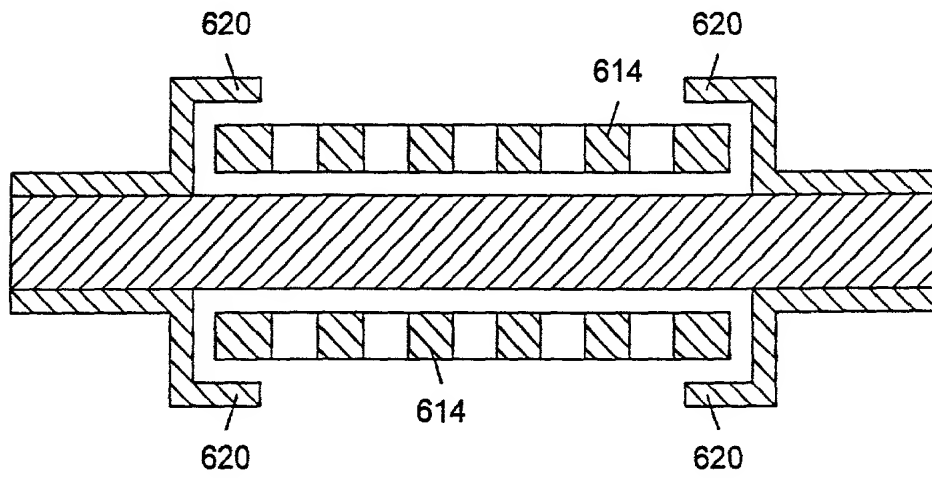


FIG. 21E

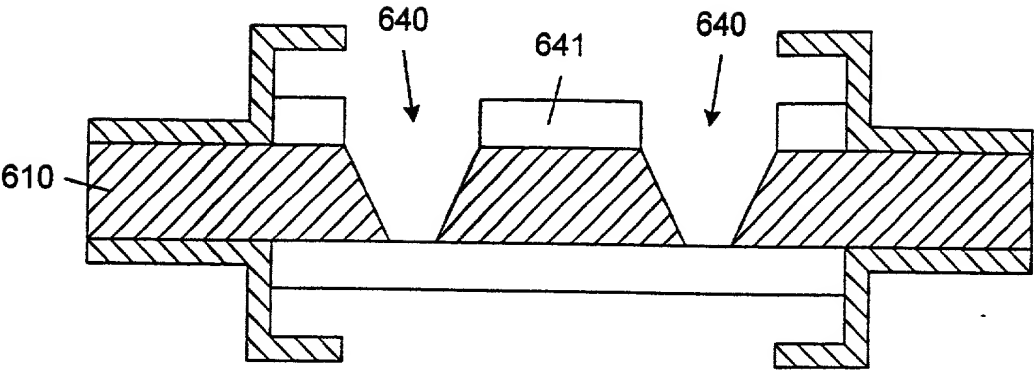


FIG. 21F

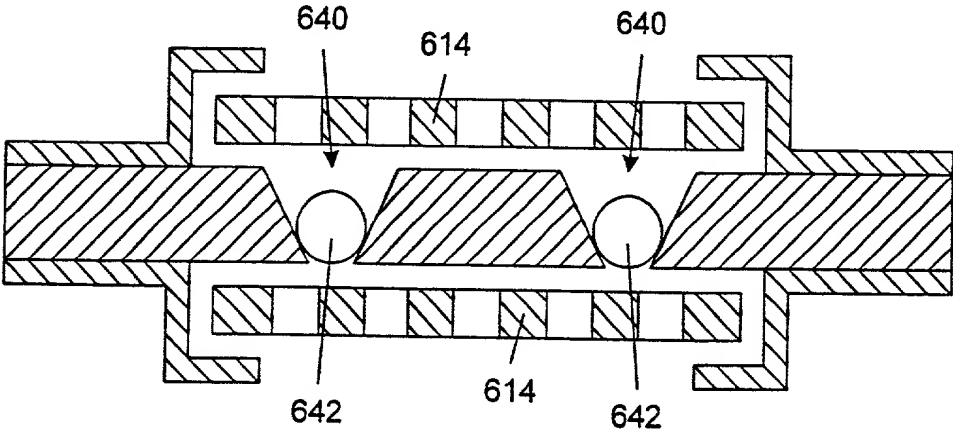


FIG. 21G



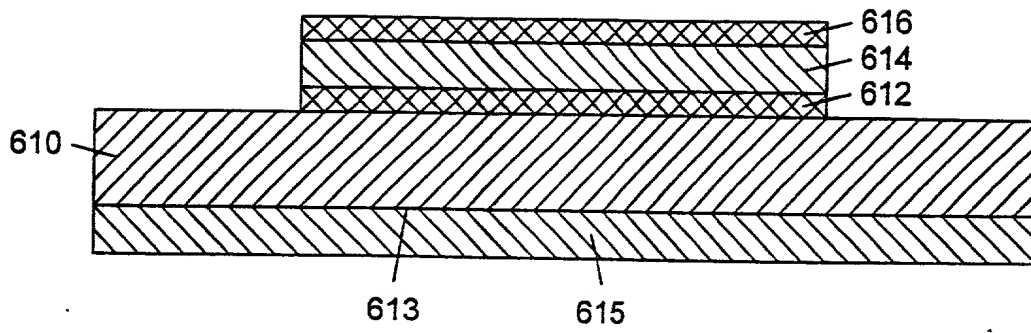


FIG. 22A

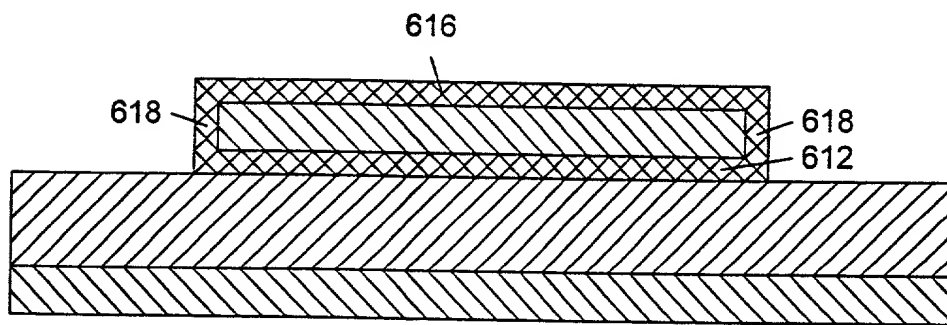


FIG. 22B

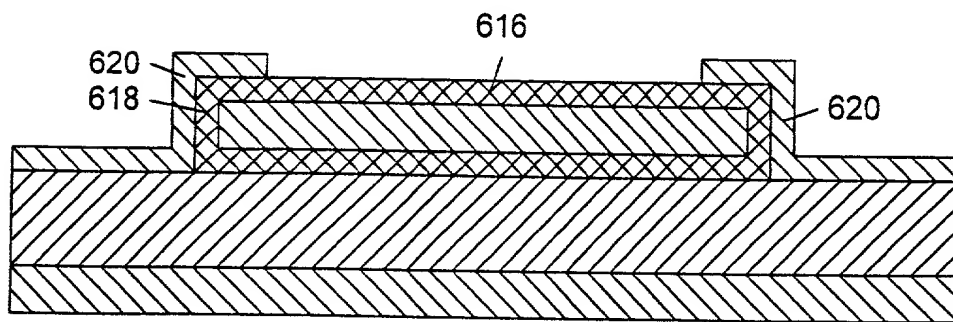


FIG. 22C

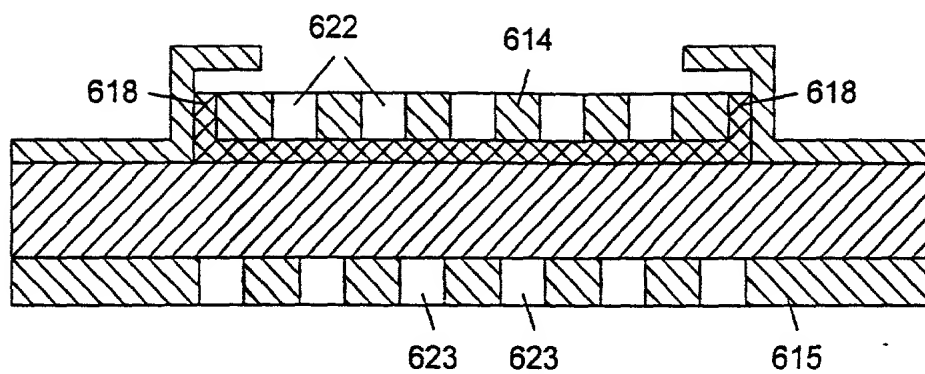


FIG. 22D

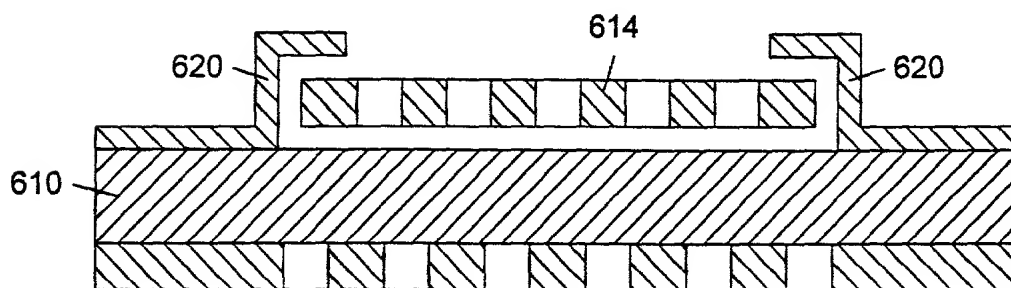


FIG. 22E

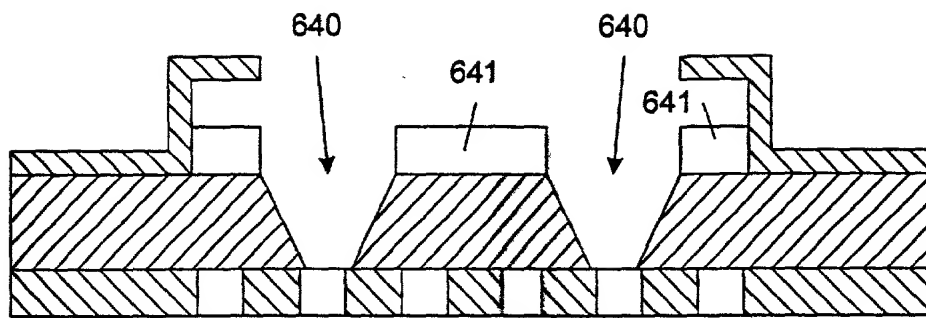


FIG. 22F

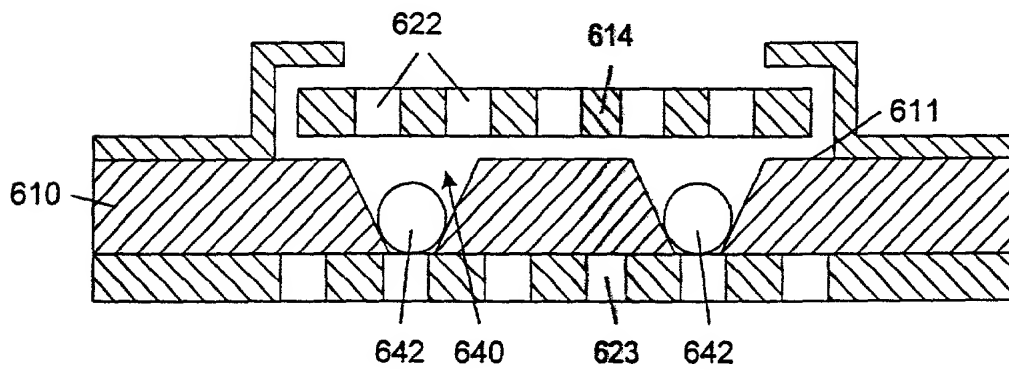


FIG. 22G

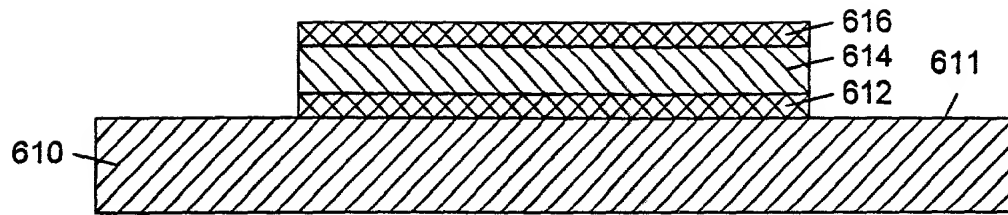


FIG. 23A

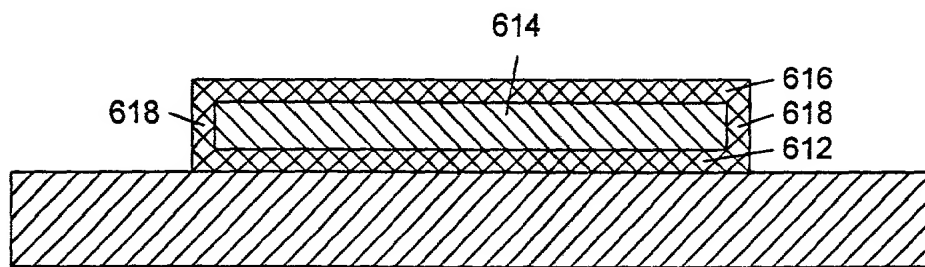


FIG. 23B

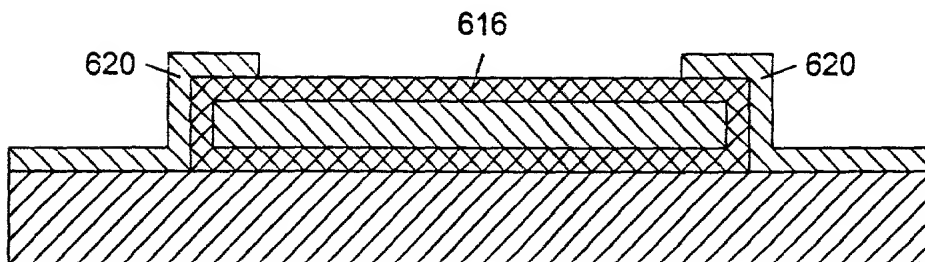


FIG. 23C

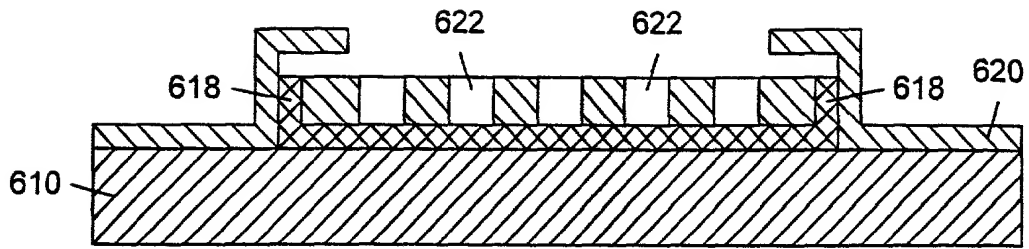


FIG. 23D

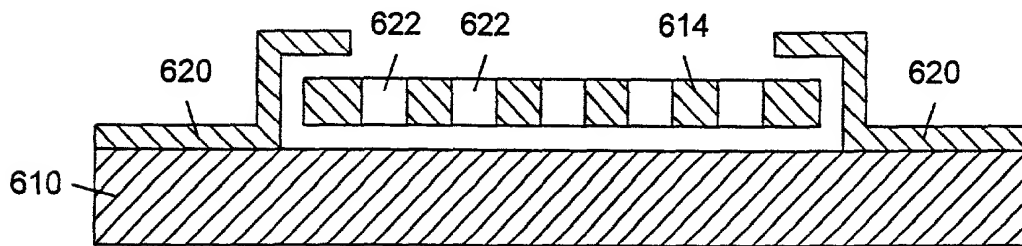


FIG. 23E

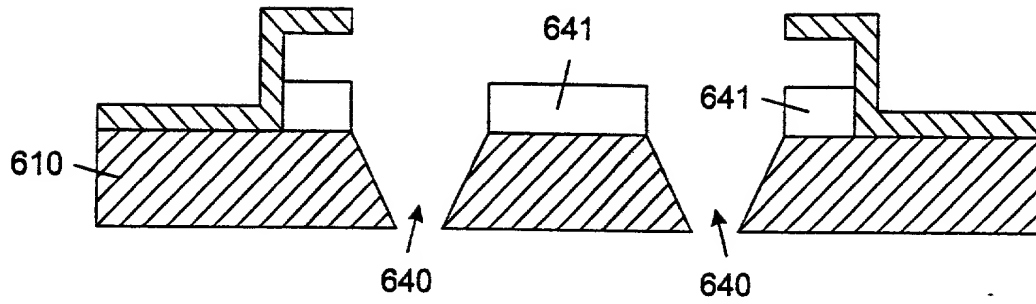


FIG. 23F

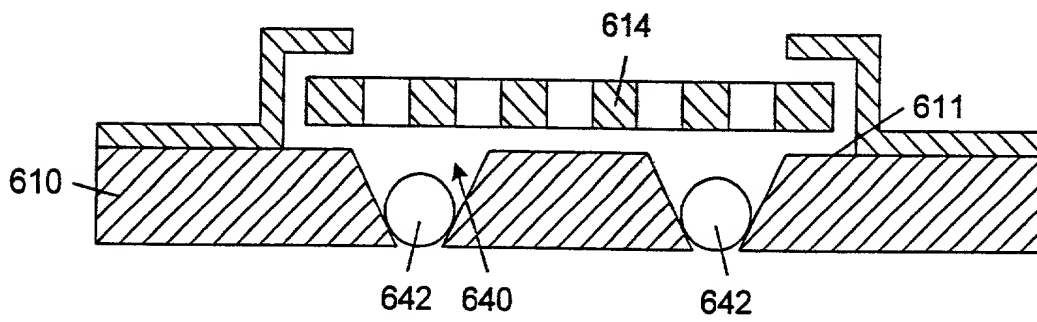


FIG. 23G

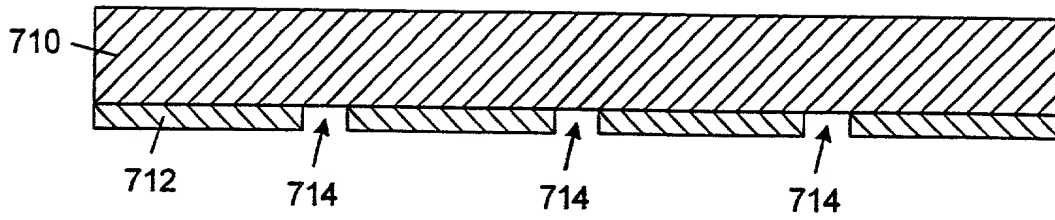


FIG. 24A

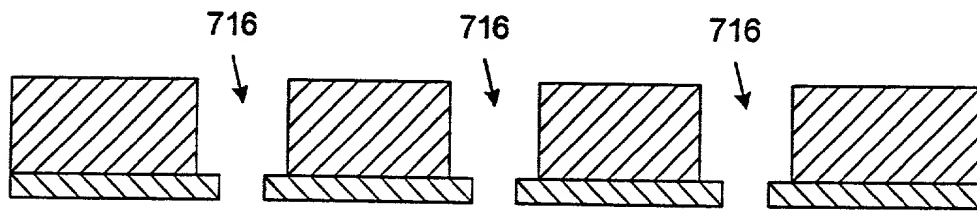


FIG. 24B

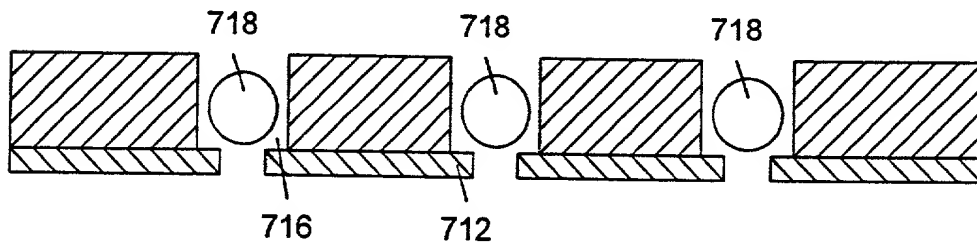


FIG. 24C

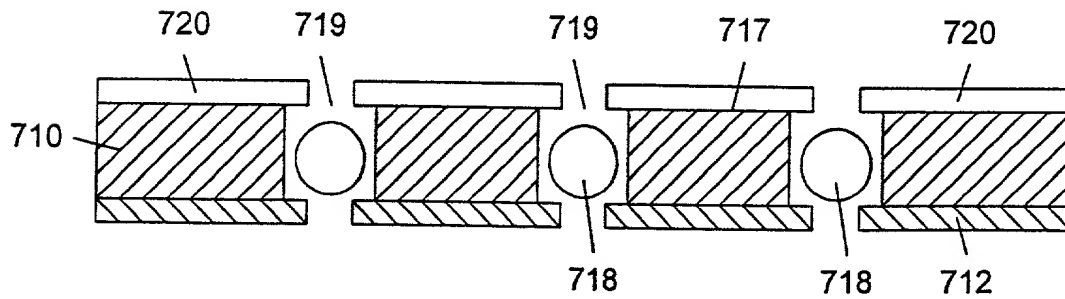


FIG. 24D

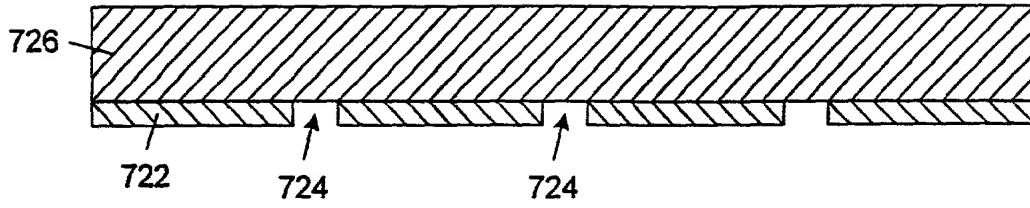


FIG. 25A

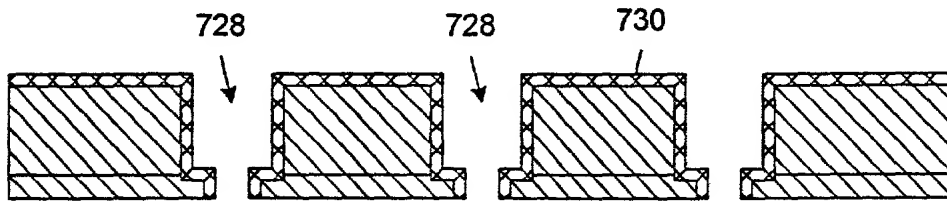


FIG. 25B

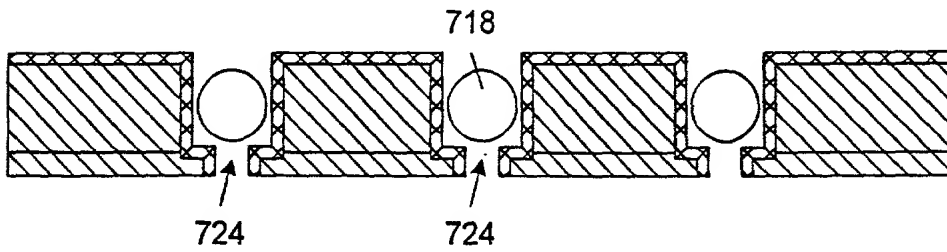


FIG. 25C

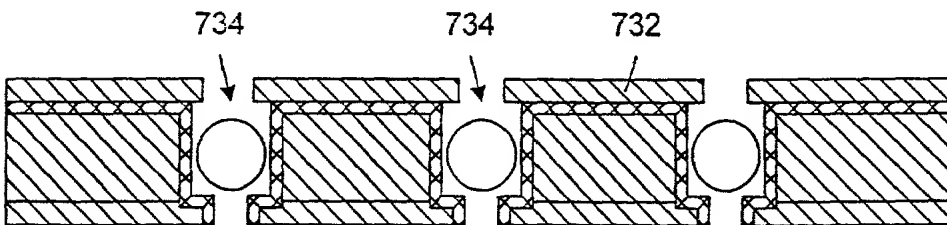


FIG. 25D



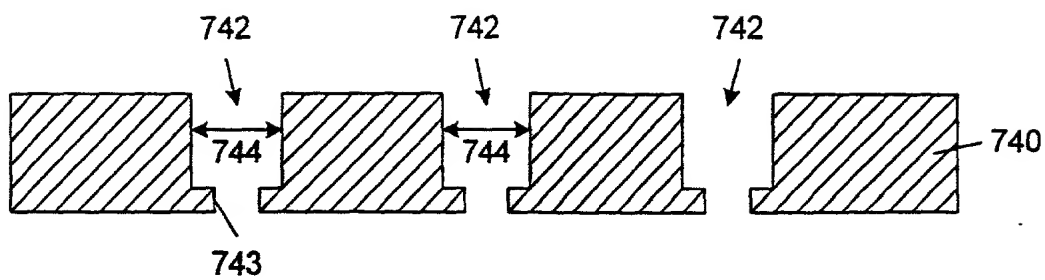


FIG. 26A

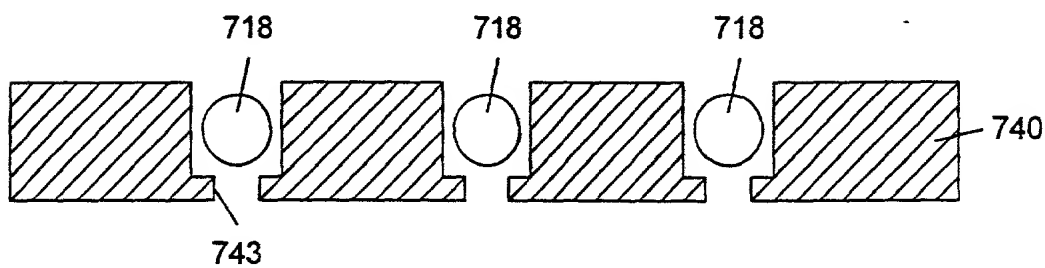


FIG. 26B

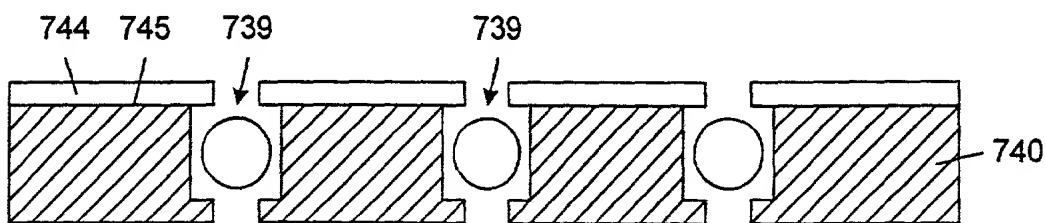


FIG. 26C

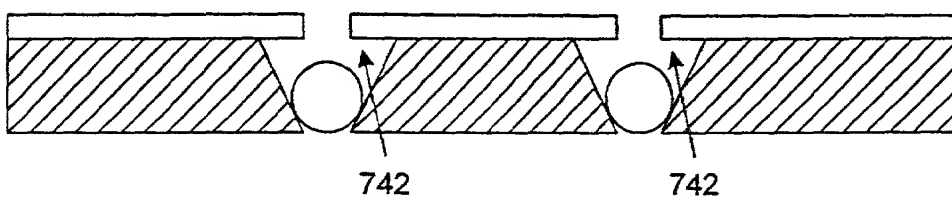


FIG. 26D

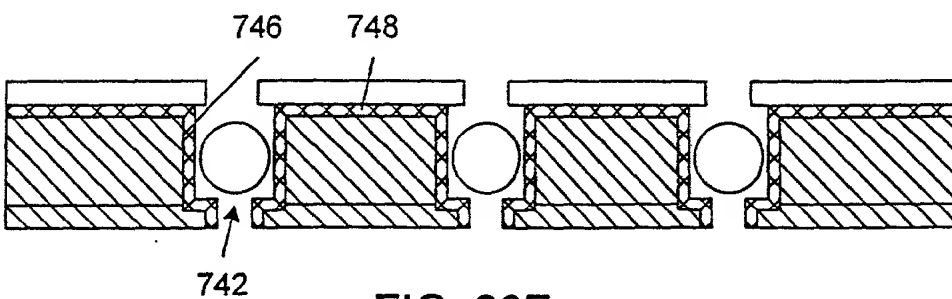


FIG. 26E

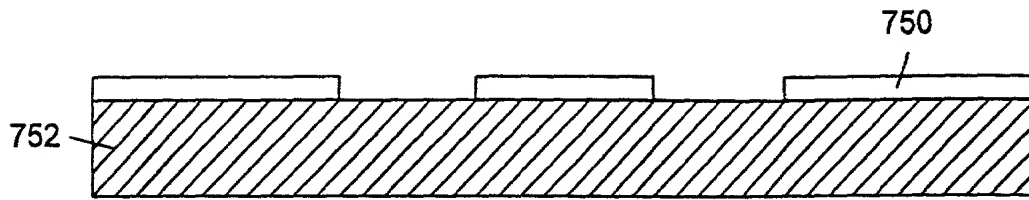


FIG. 27A

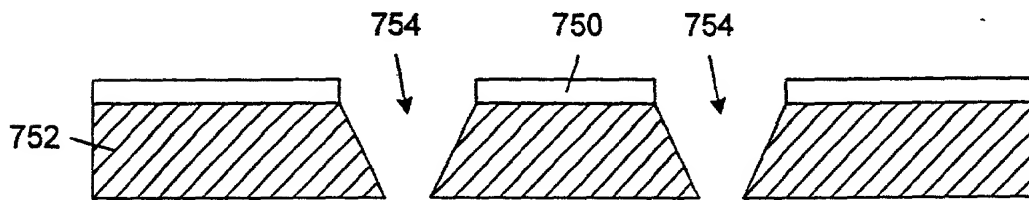


FIG. 27B

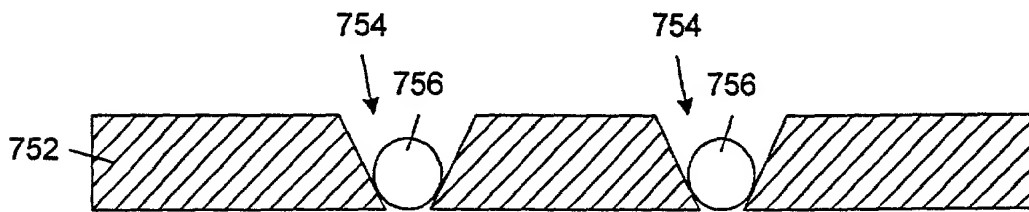


FIG. 27C

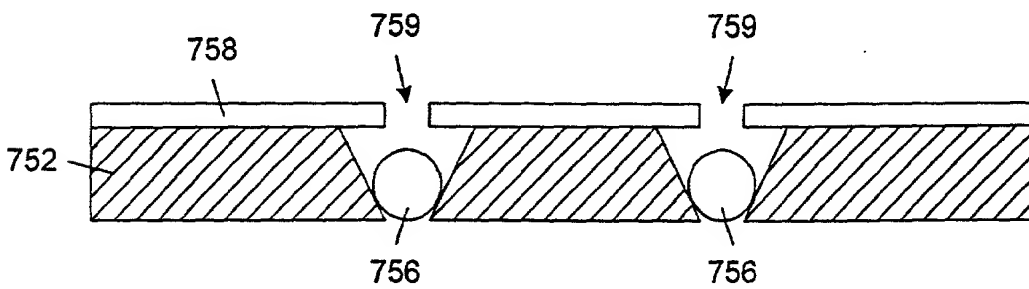


FIG. 27D

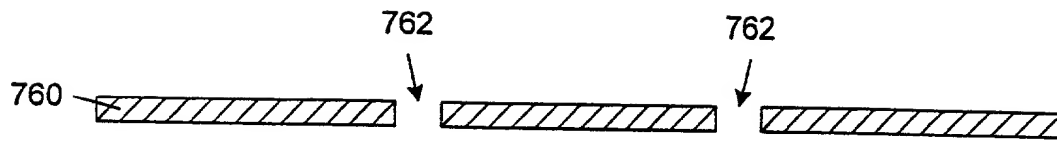


FIG. 28A

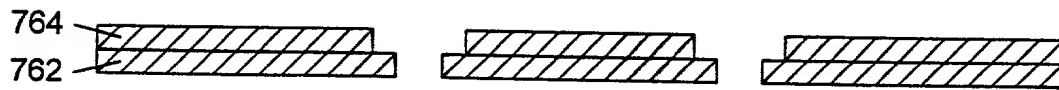


FIG. 28B

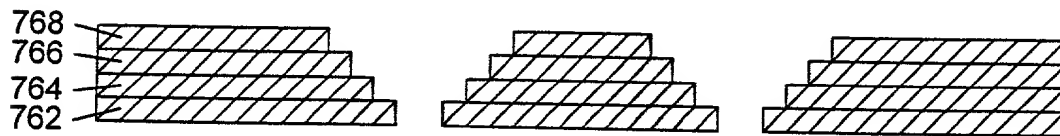


FIG. 28C

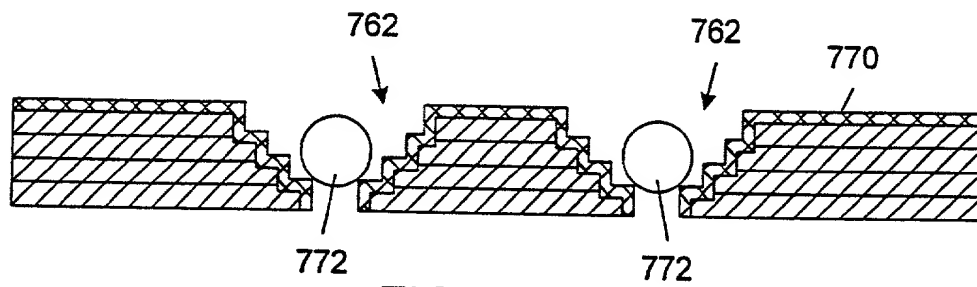


FIG. 28D

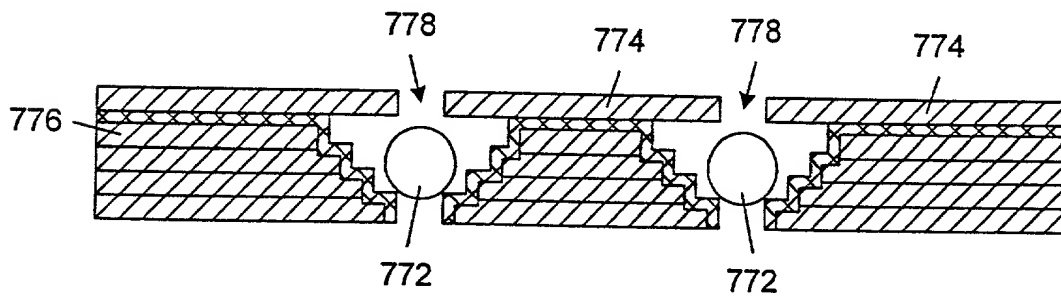


FIG. 28E

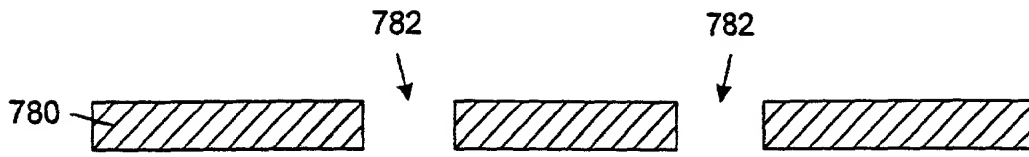


FIG. 29A

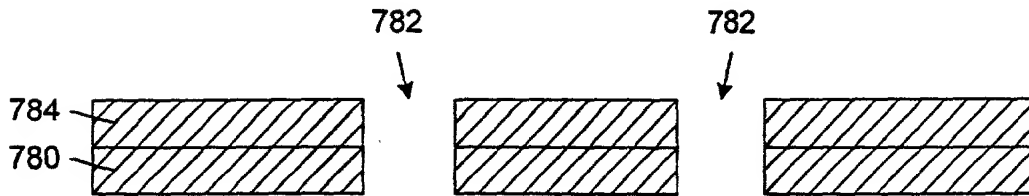


FIG. 29B

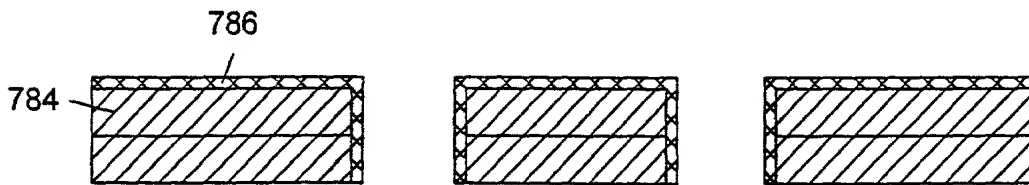


FIG. 29C

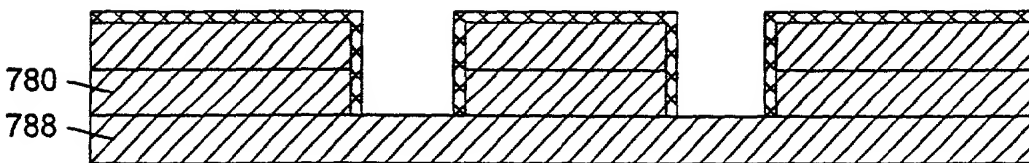


FIG. 29D

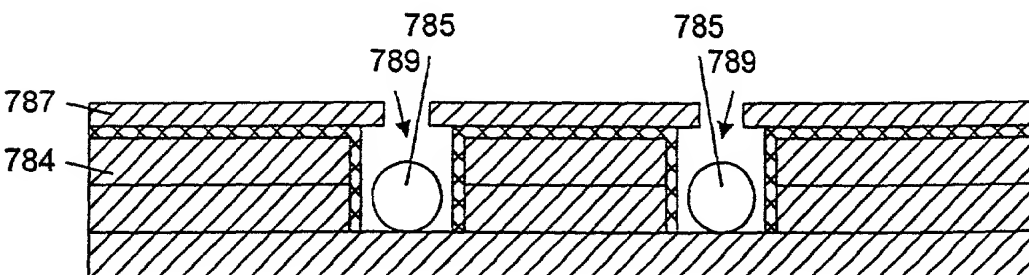


FIG. 29E

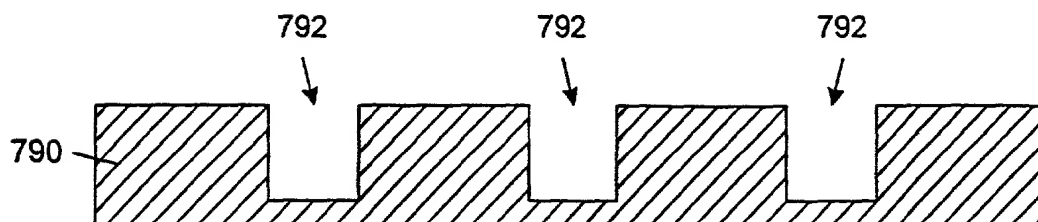


FIG. 30A

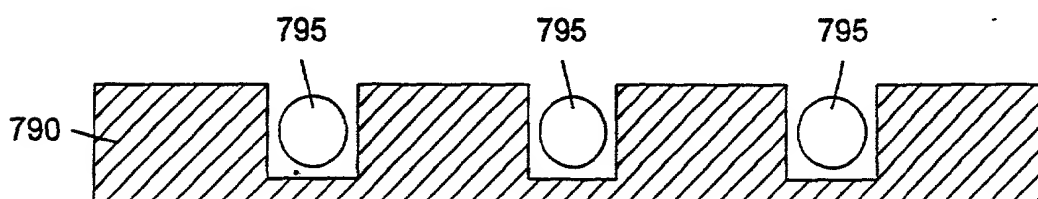


FIG. 30B

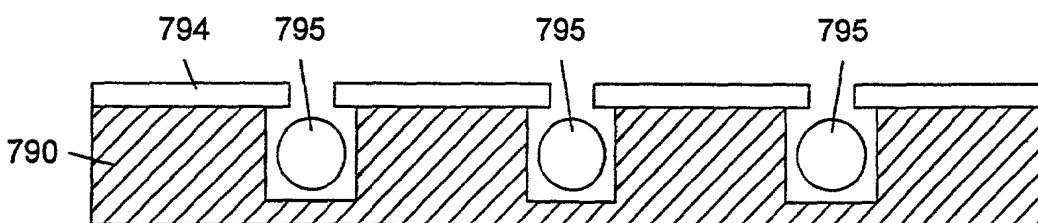


FIG. 30C

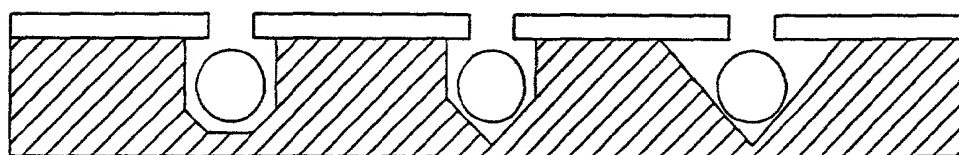


FIG. 30D

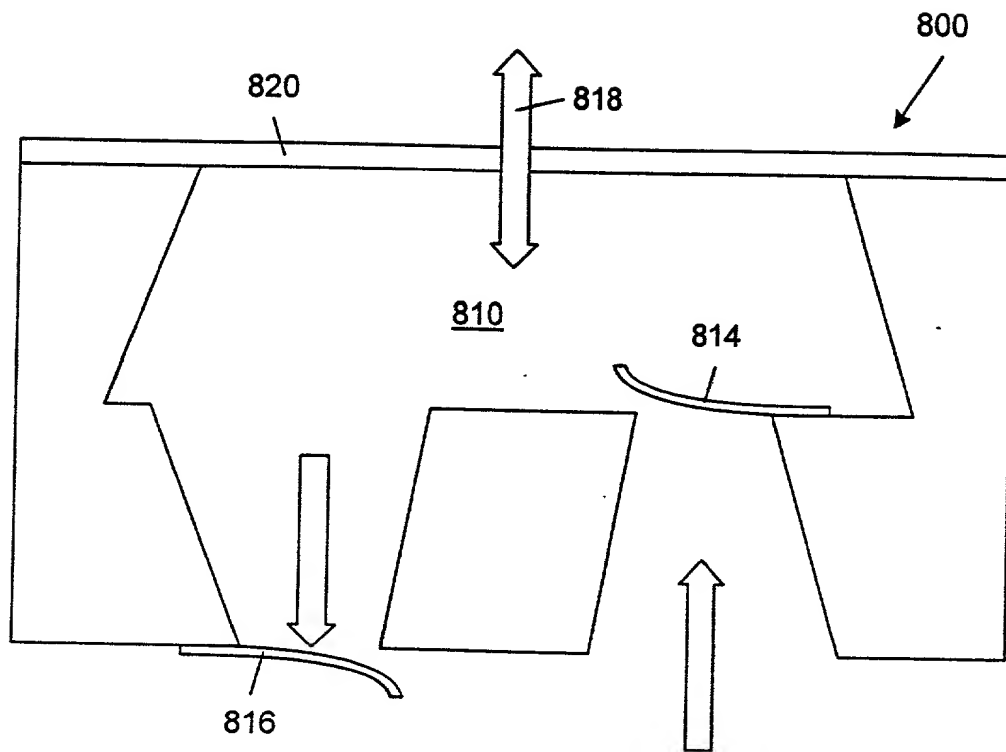


FIG. 31

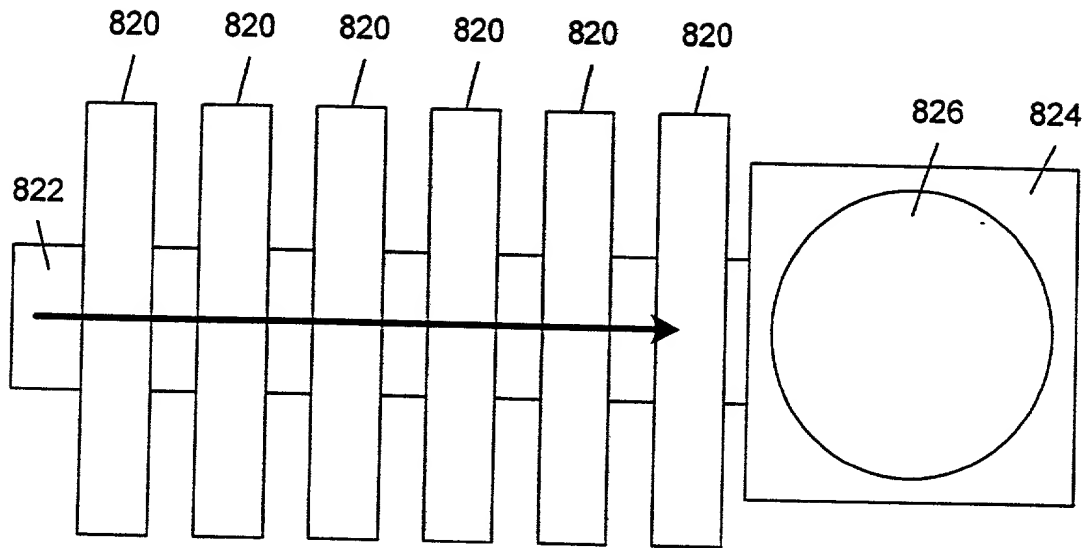


FIG. 32

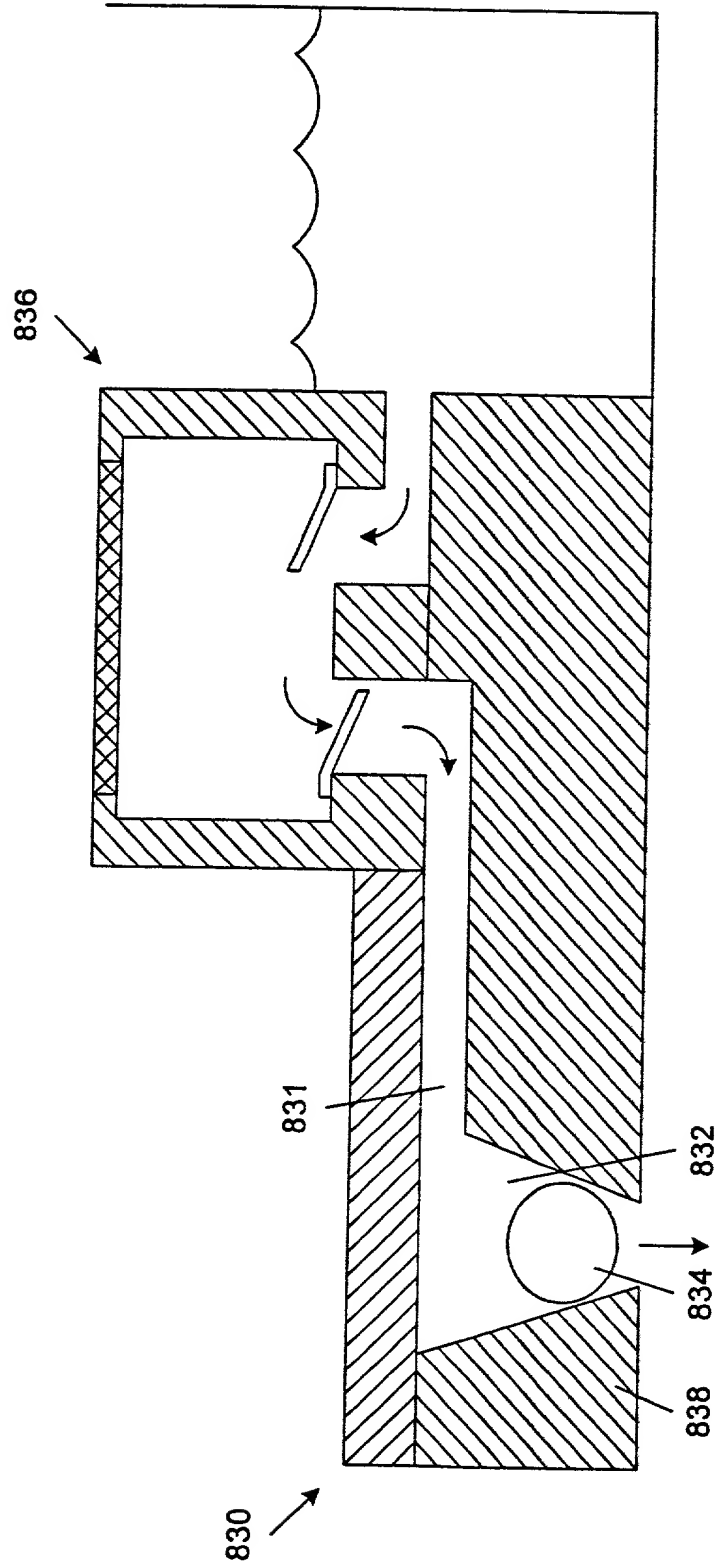


FIG. 33



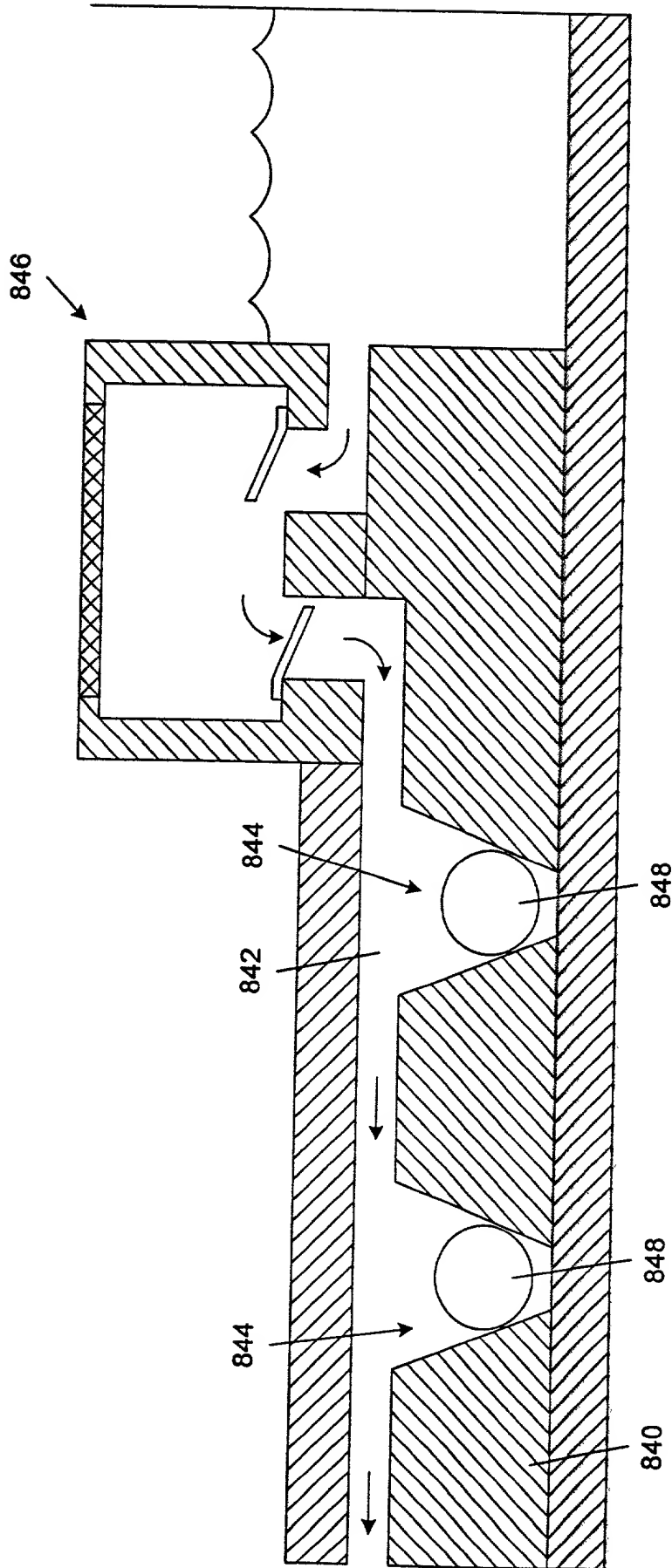


FIG. 34

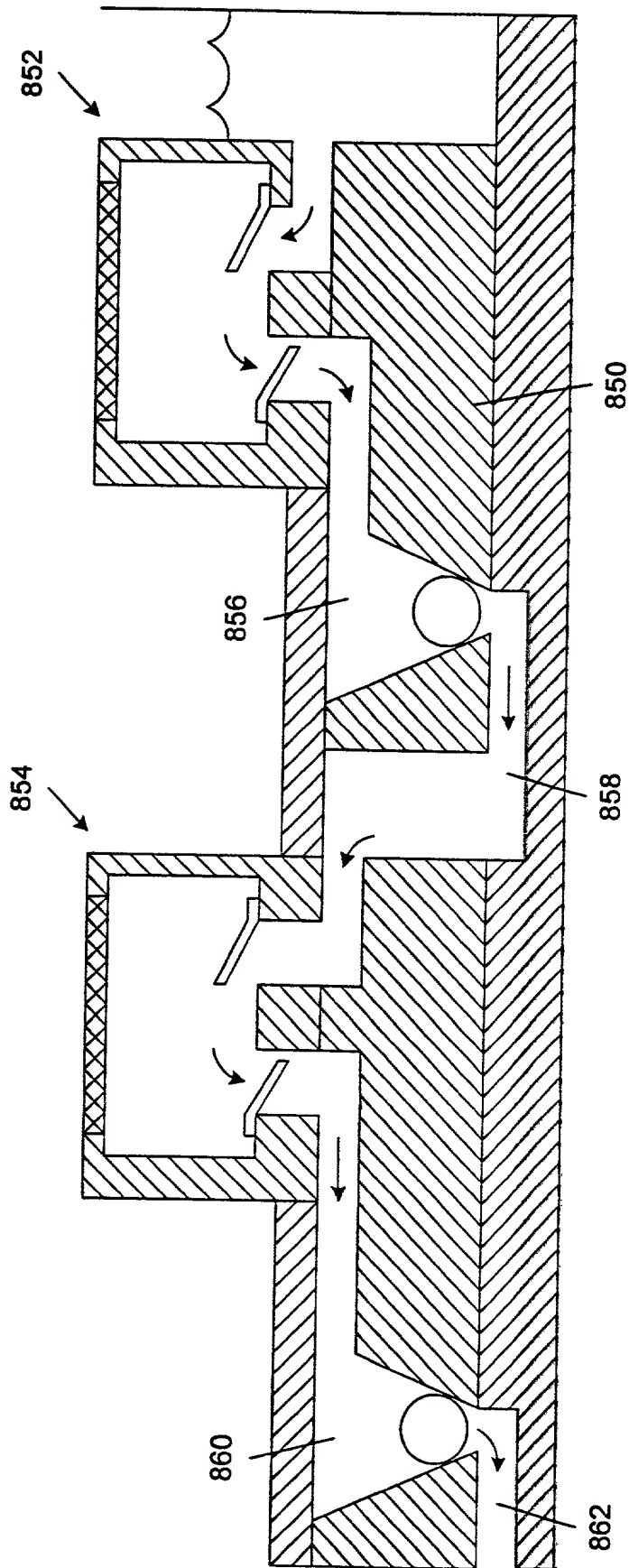


FIG. 35

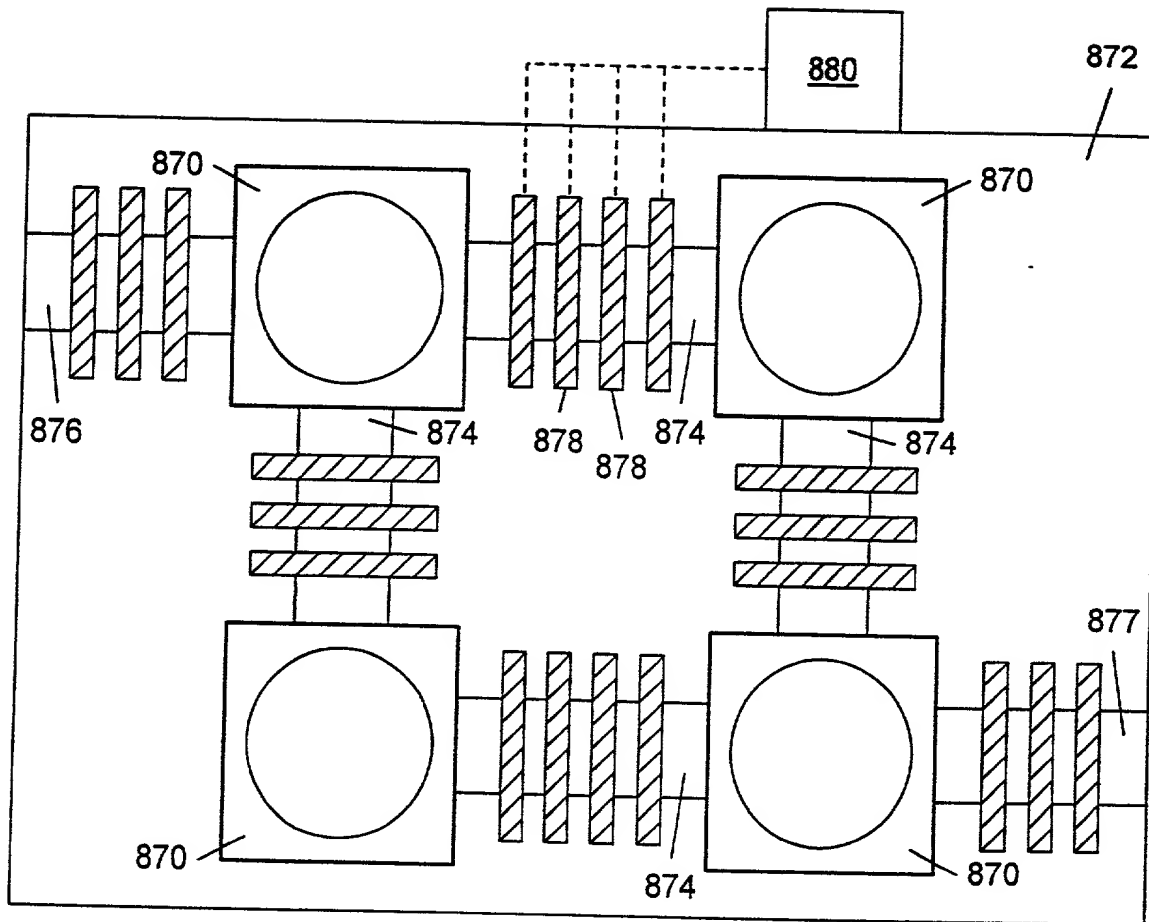


FIG. 36

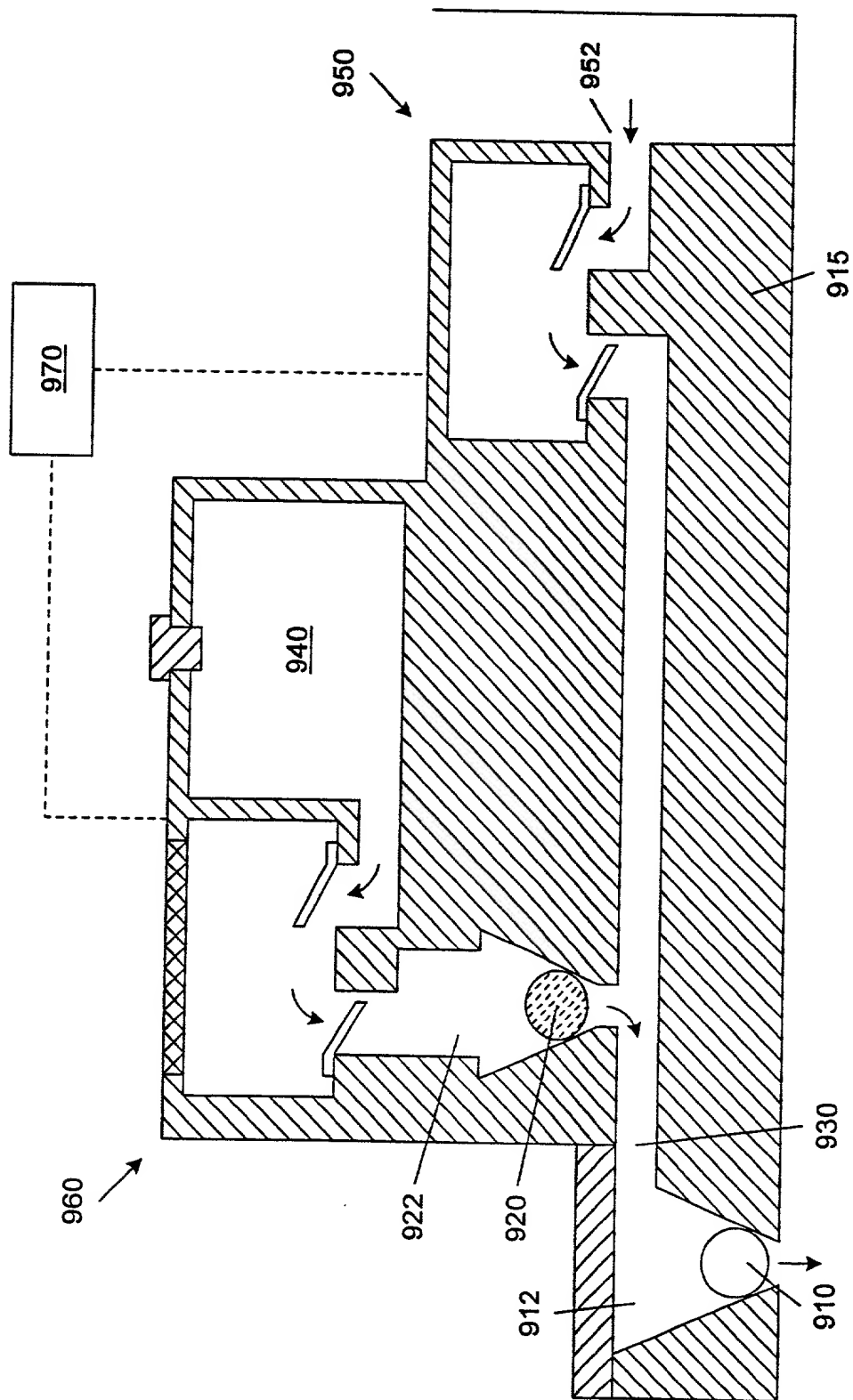


FIG. 37

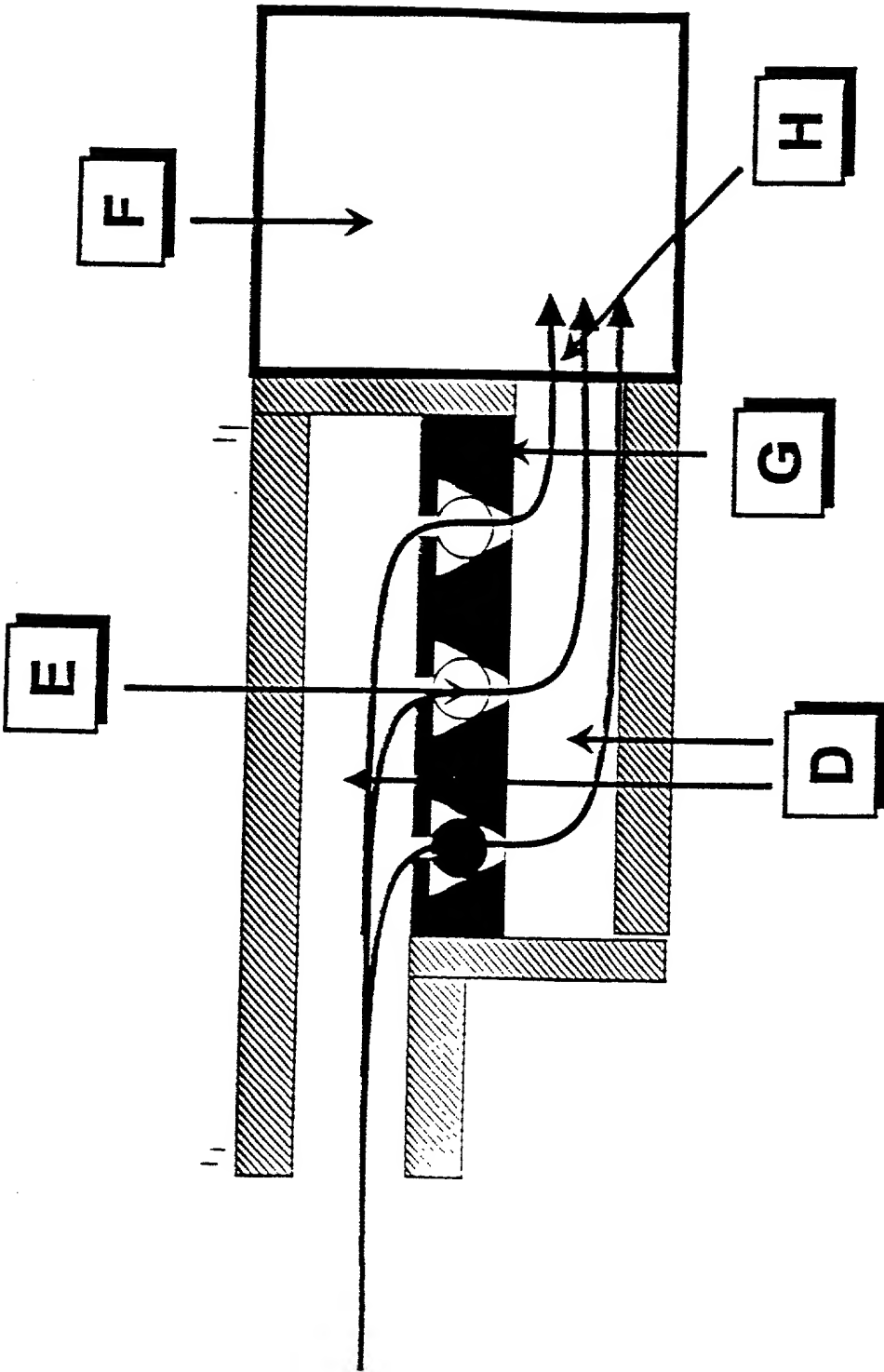


Figure 38

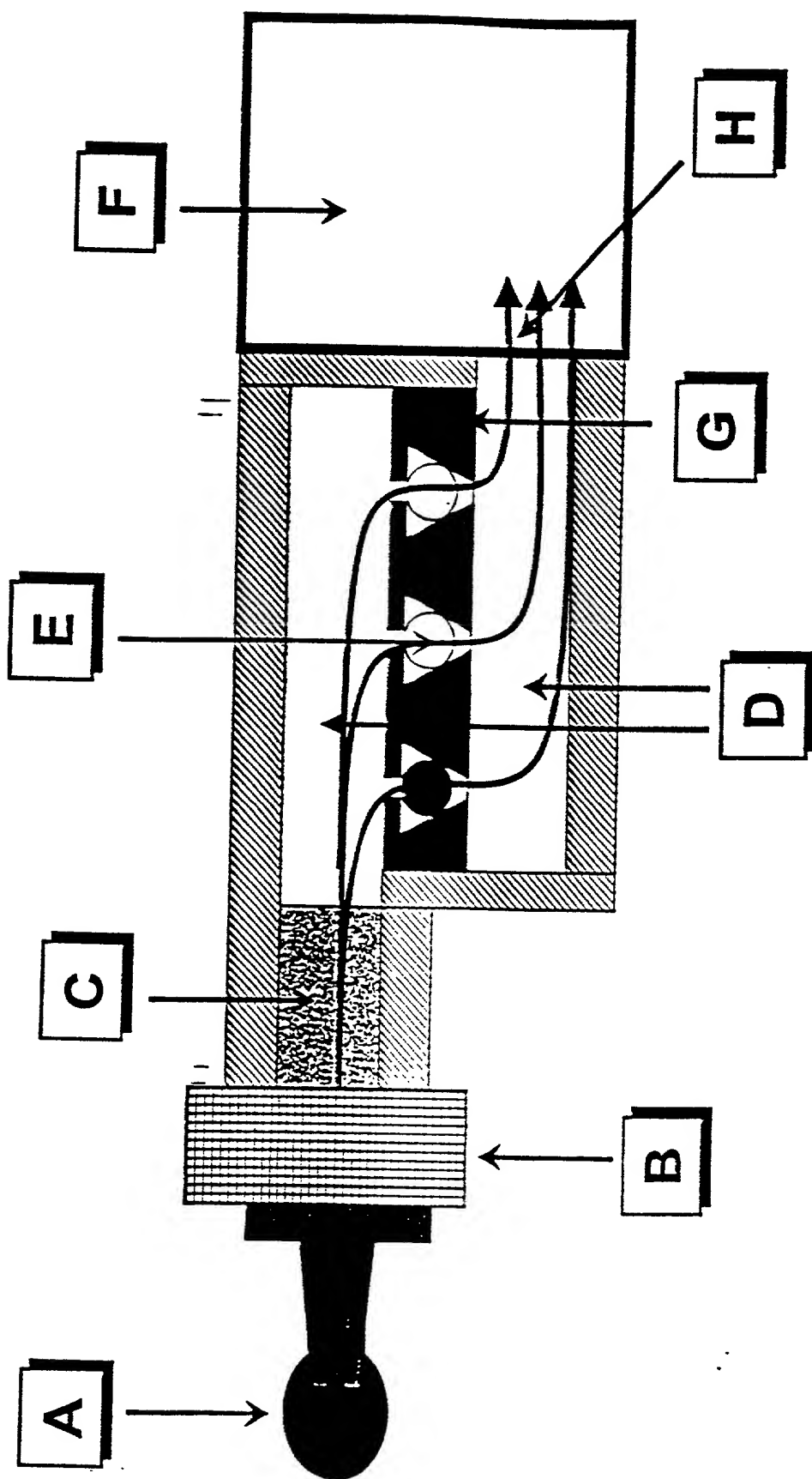
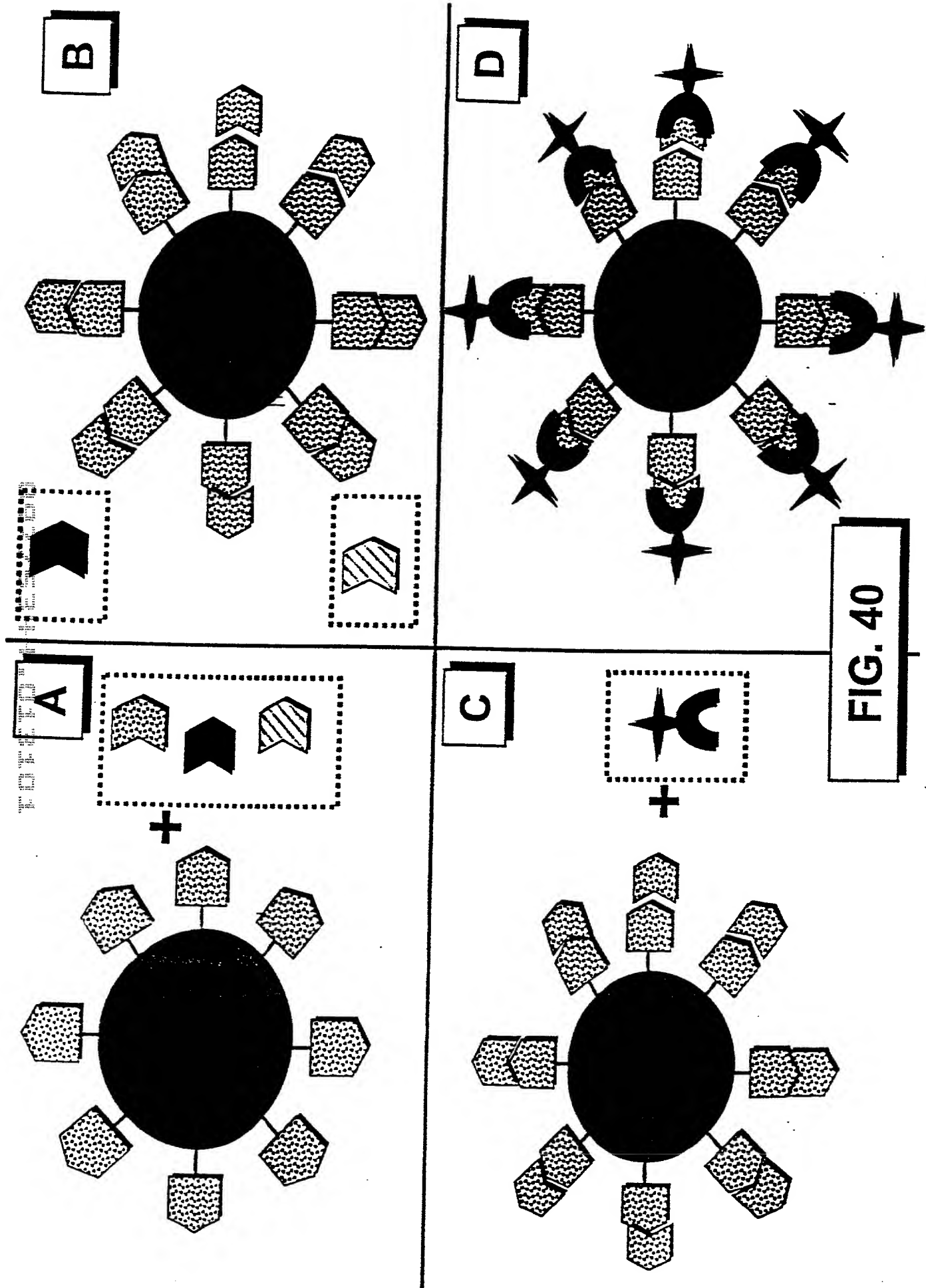


Figure 39



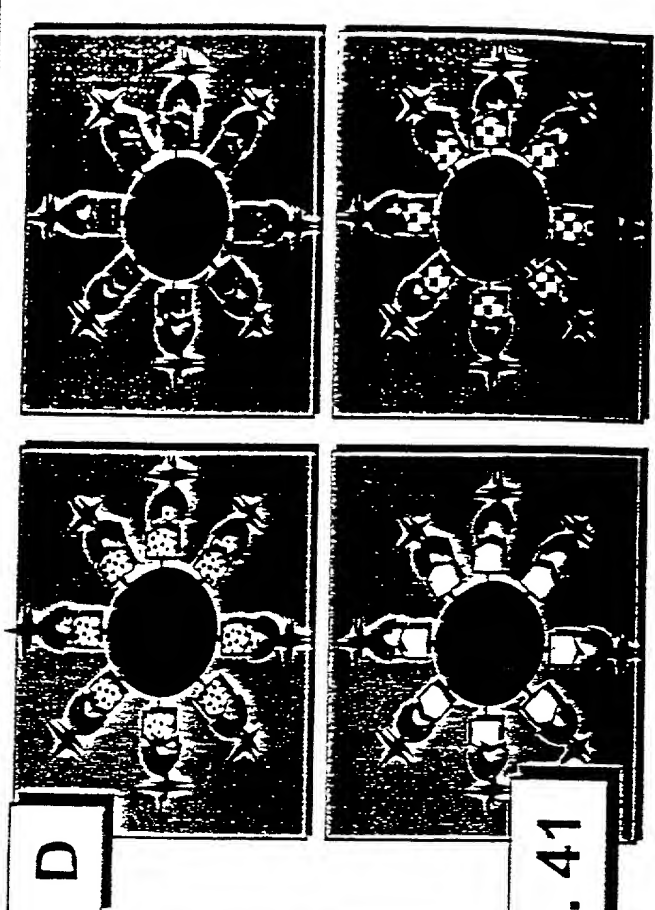
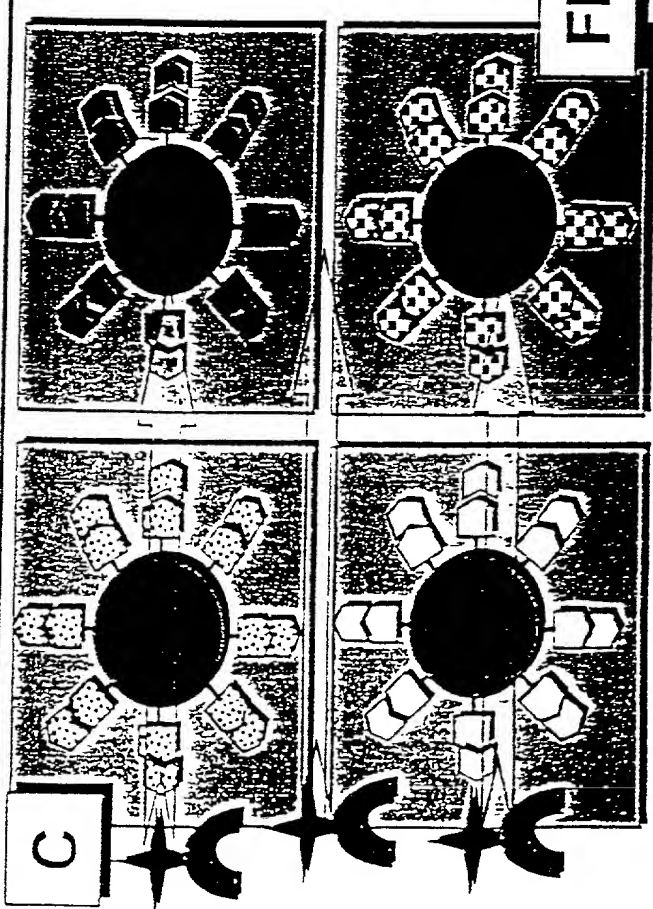
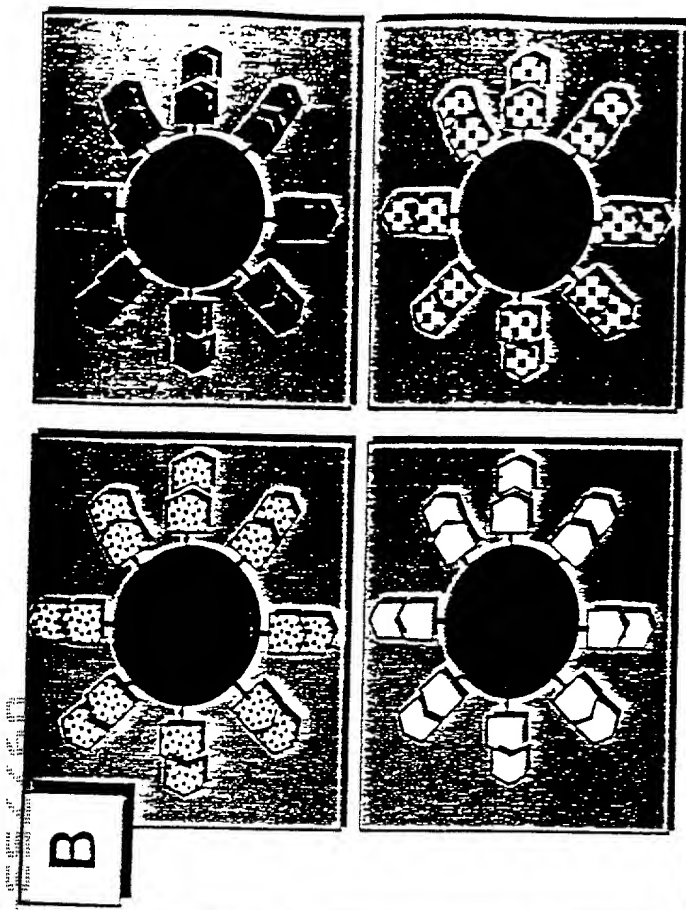
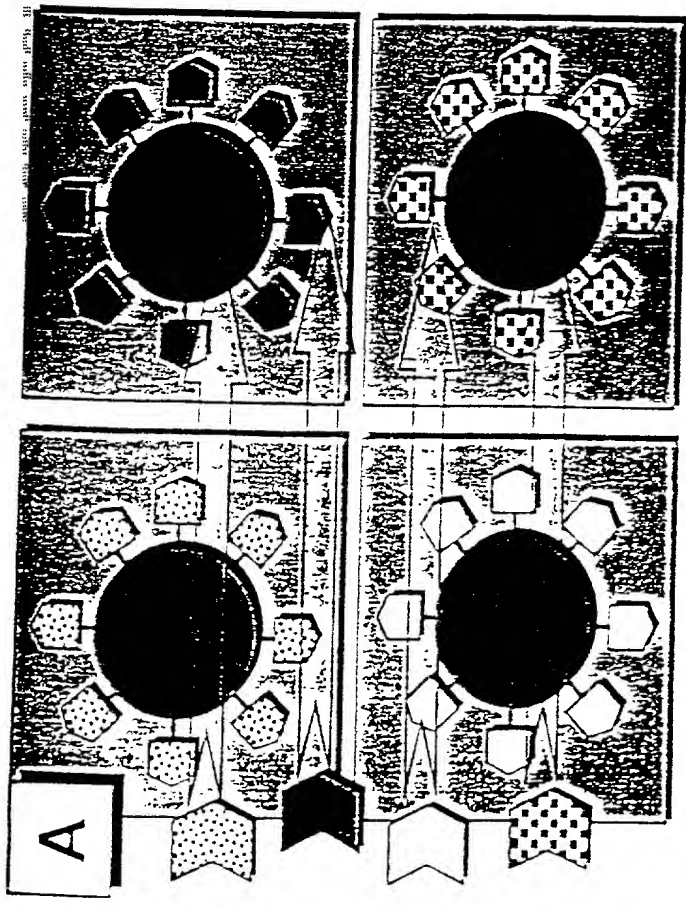


FIG. 41



# Electronic Tongue Biological Sample Acquisition

## Prototype 6/2/99

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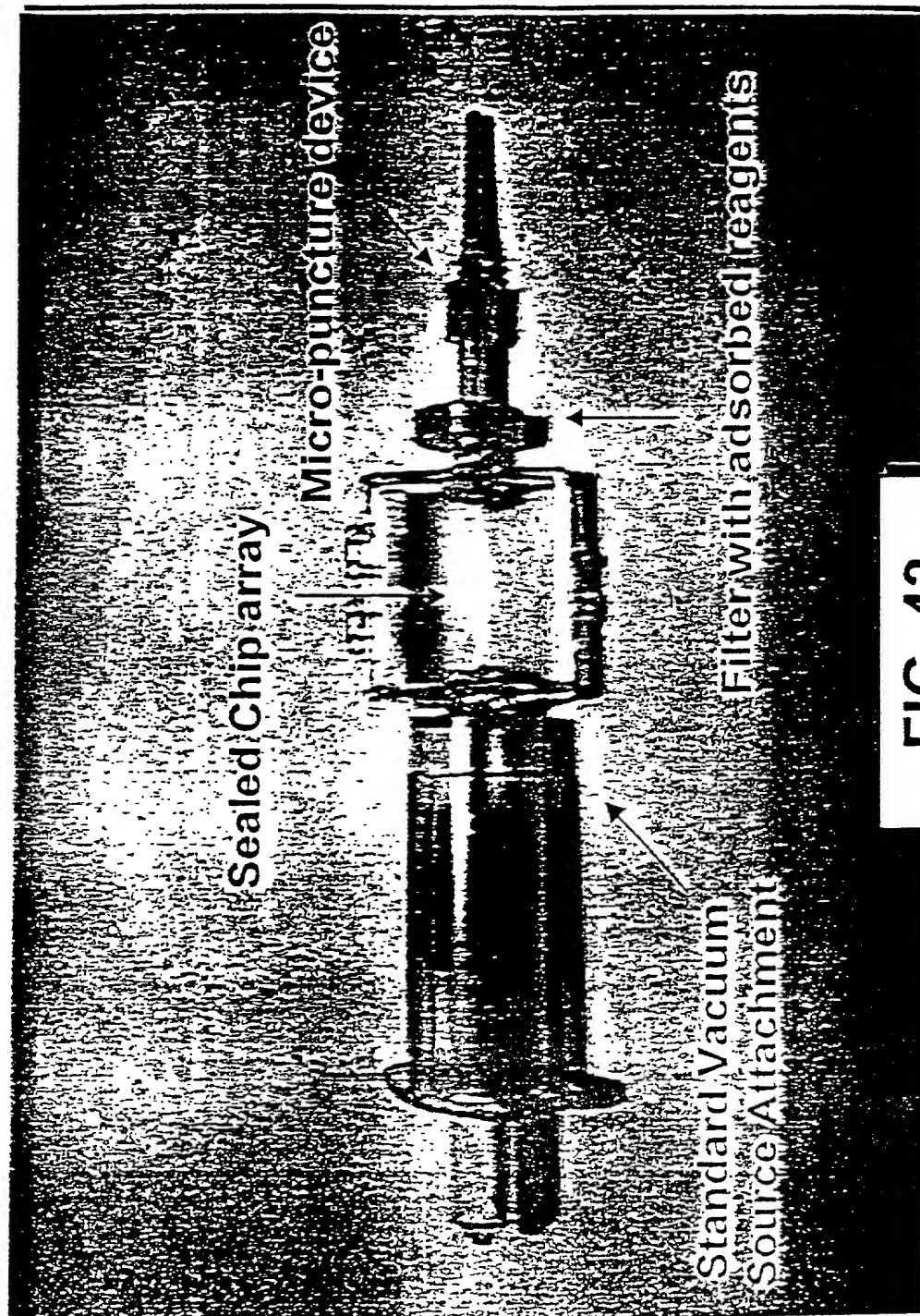


FIG. 42

FIG. 43

Forward Flow Direction

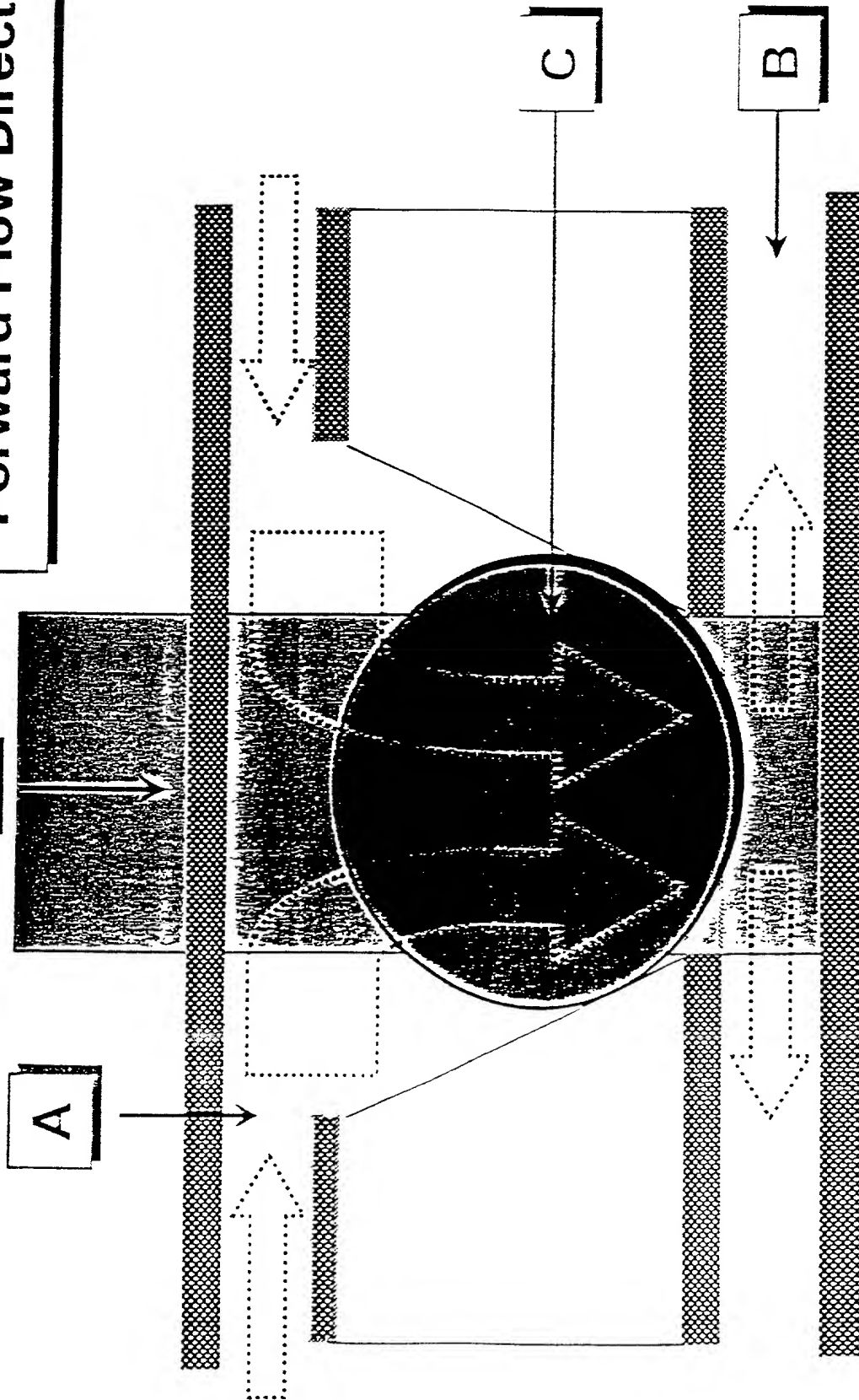
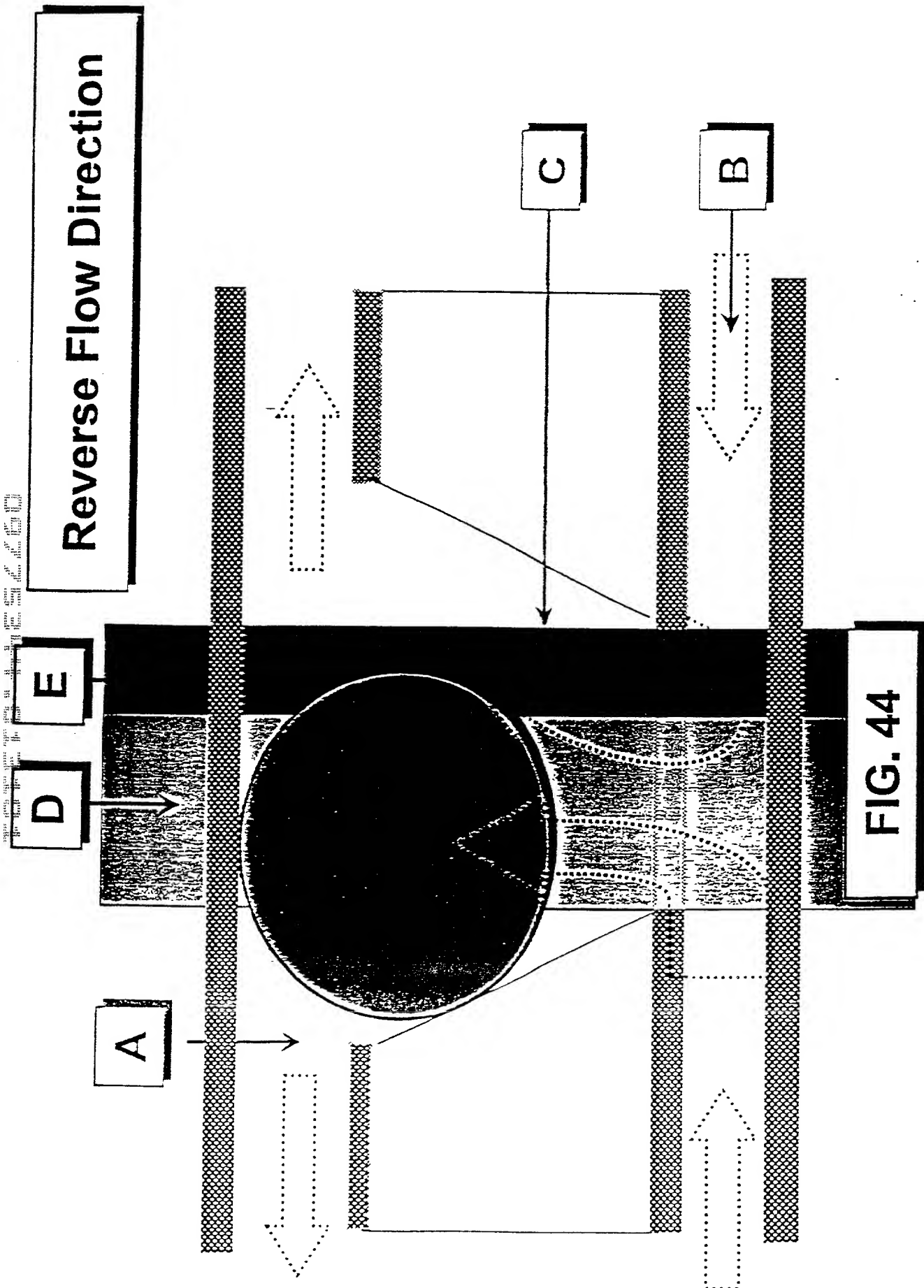


FIG. 43



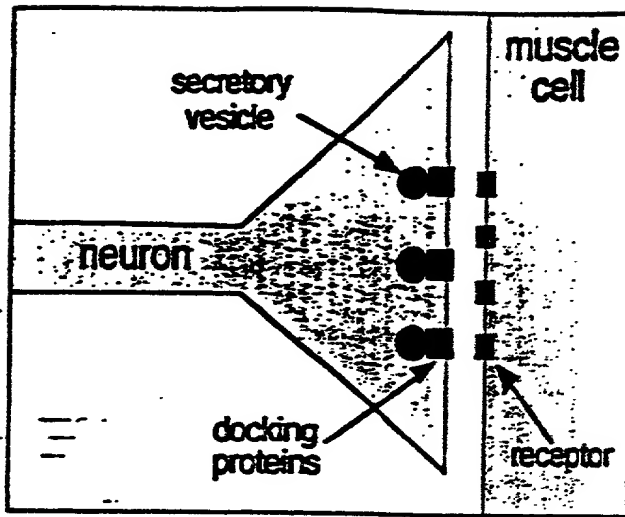


Fig. 45-A

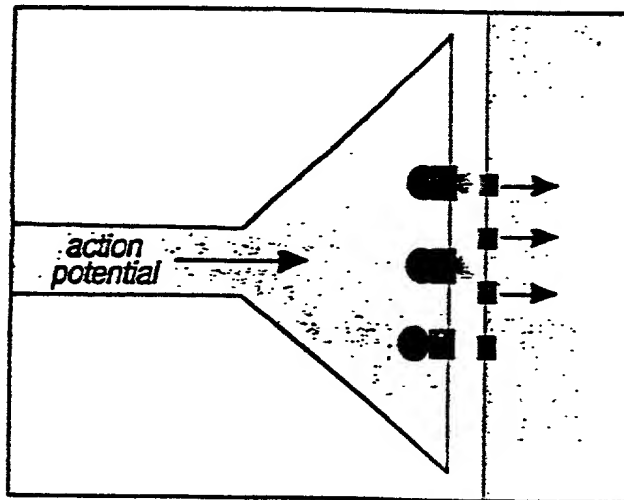


Fig. 45-B

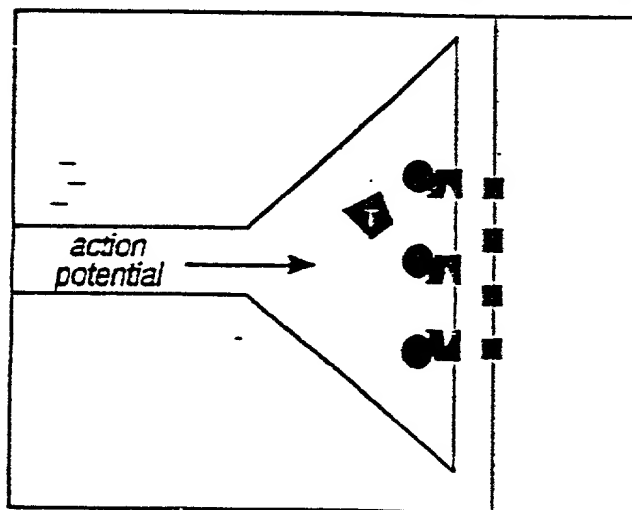


Fig. 45-C

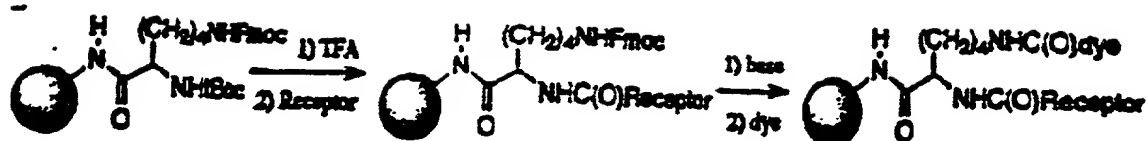


FIG. 45 D

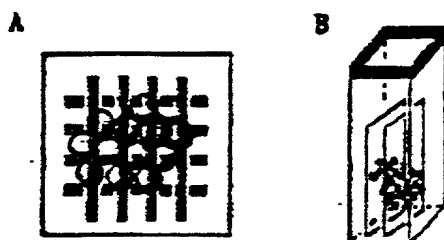


FIG. 46

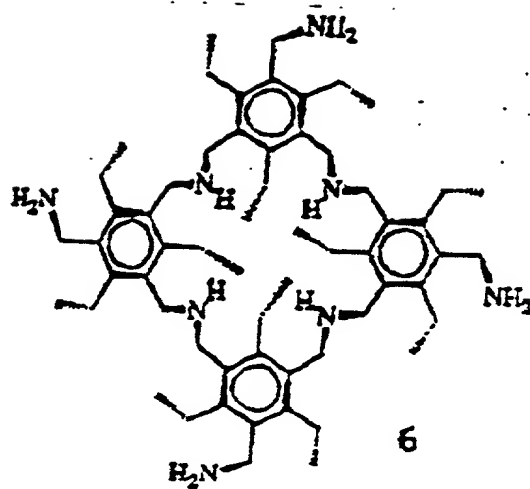
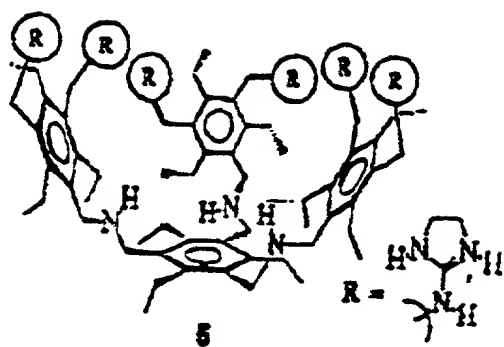
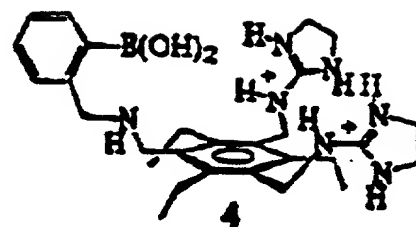
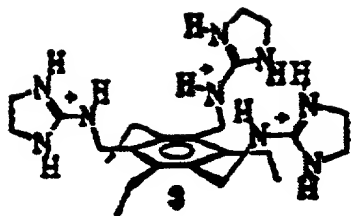


FIG. 47

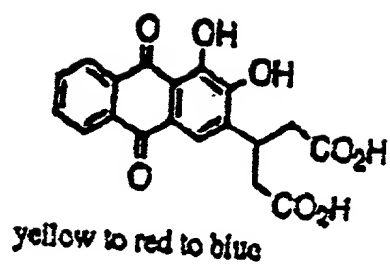
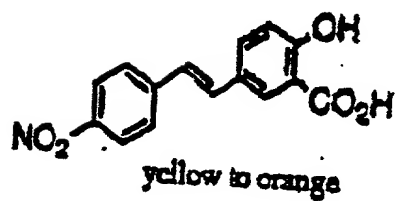
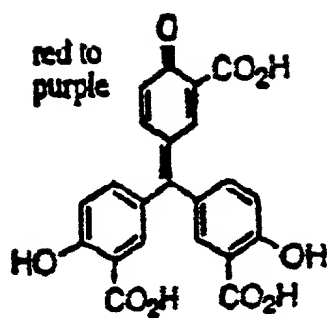
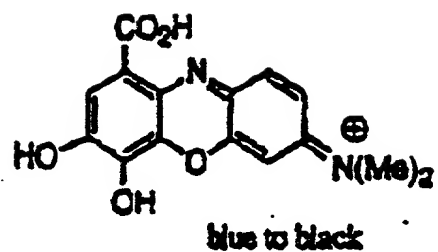
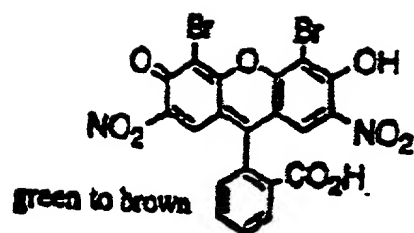


FIG. 48

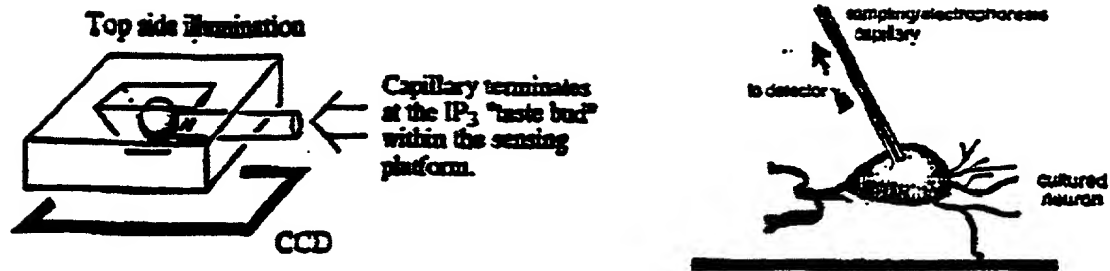


FIG. 49

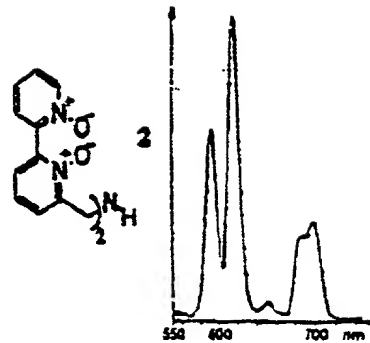
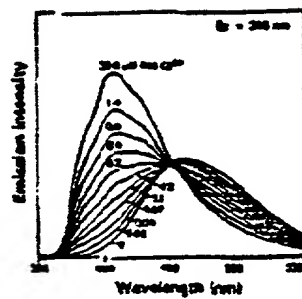
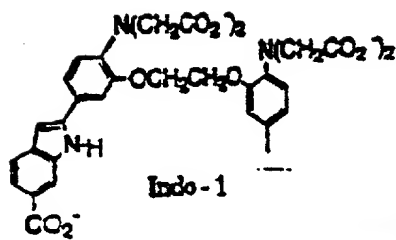


FIG. 50



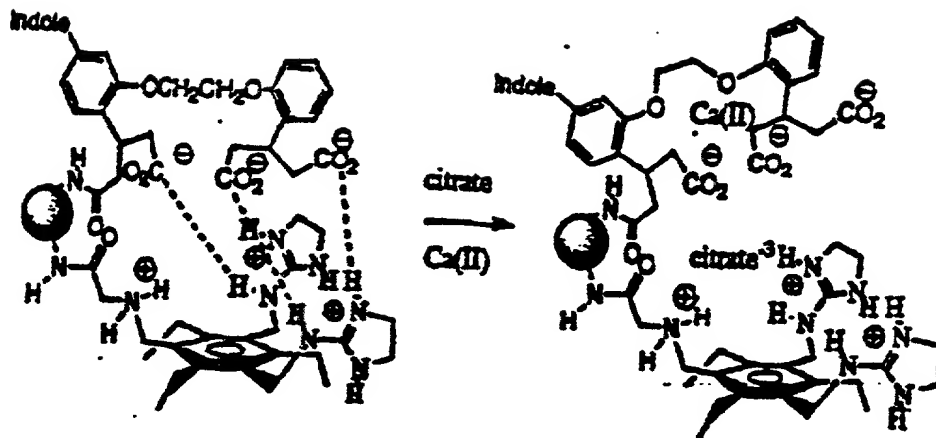


FIG. 51

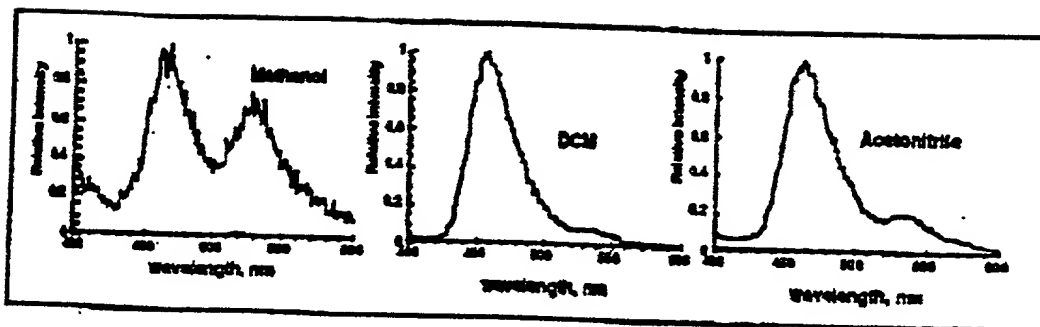


FIG. 52

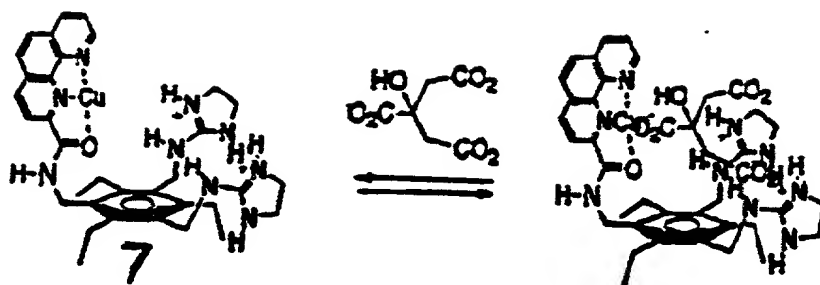


FIG. 53

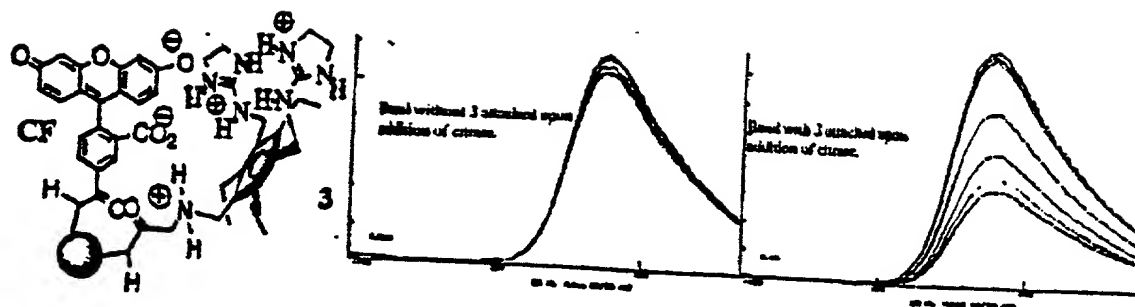


FIG. 54

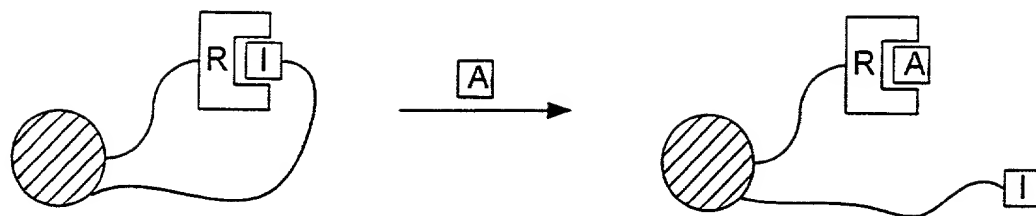


FIG. 55A

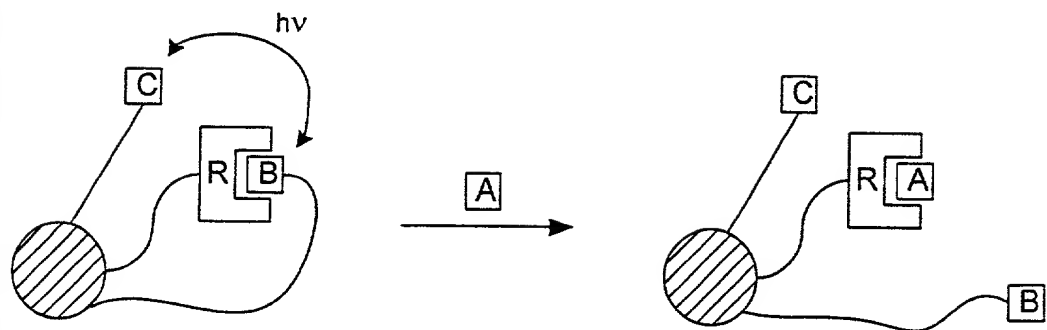


FIG. 55B

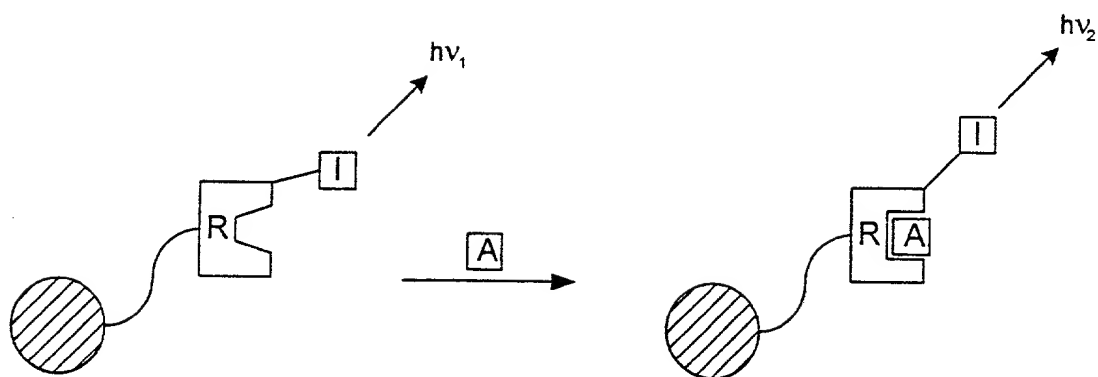


FIG. 55C

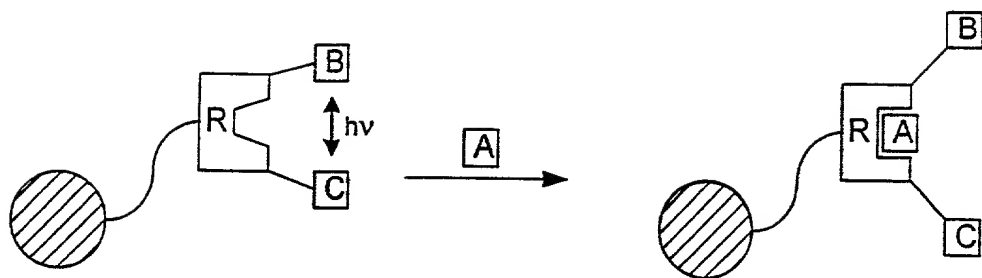


FIG. 55D

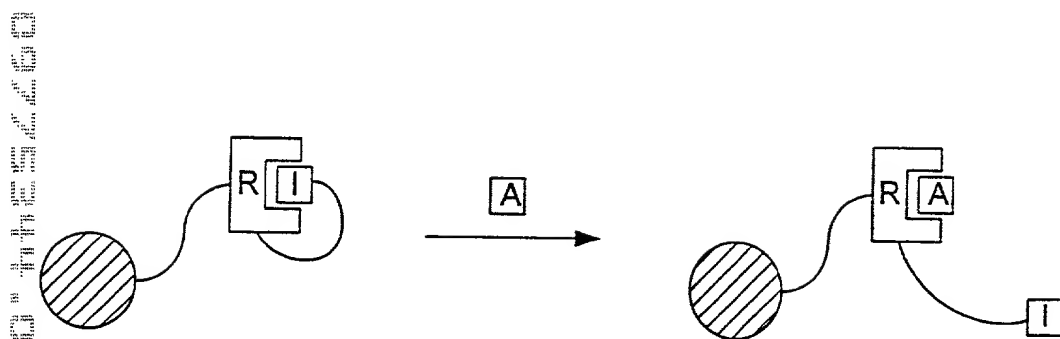


FIG. 55E

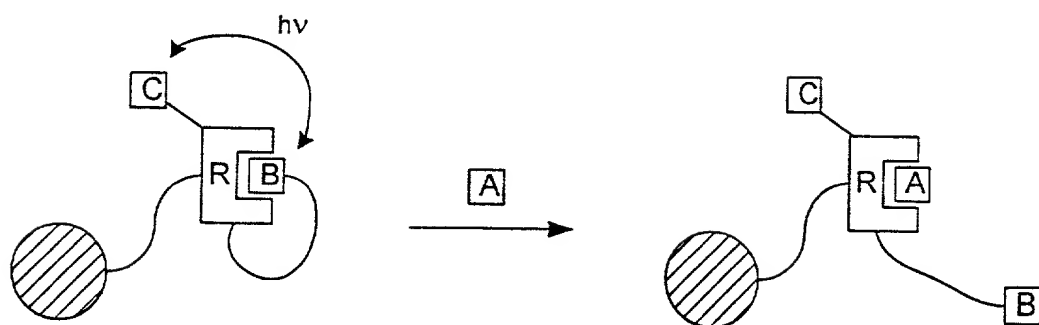


FIG. 55F

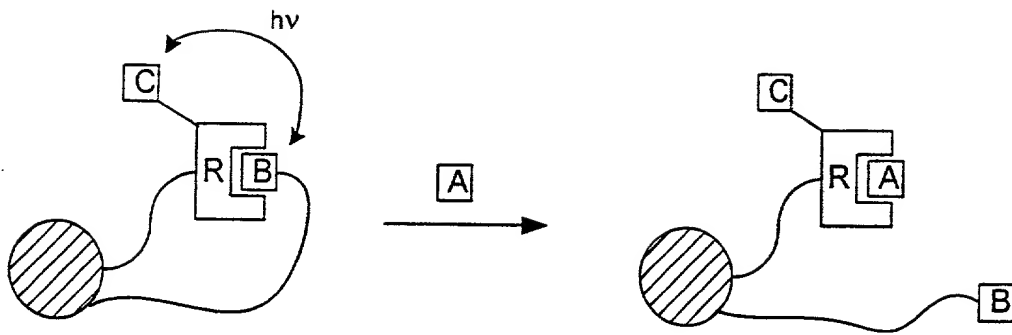


FIG. 55G

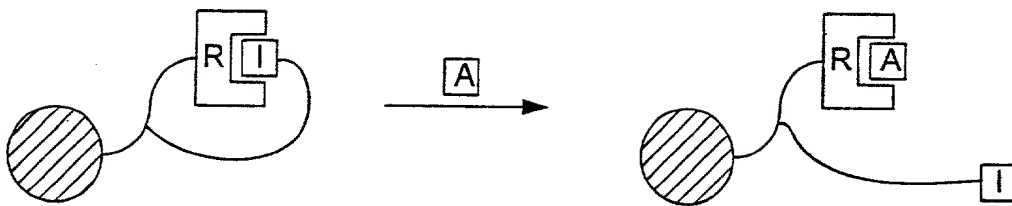


FIG. 55H

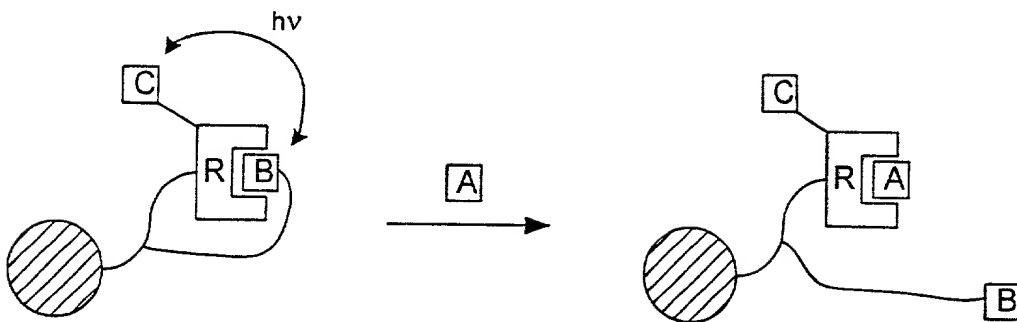


FIG. 55I

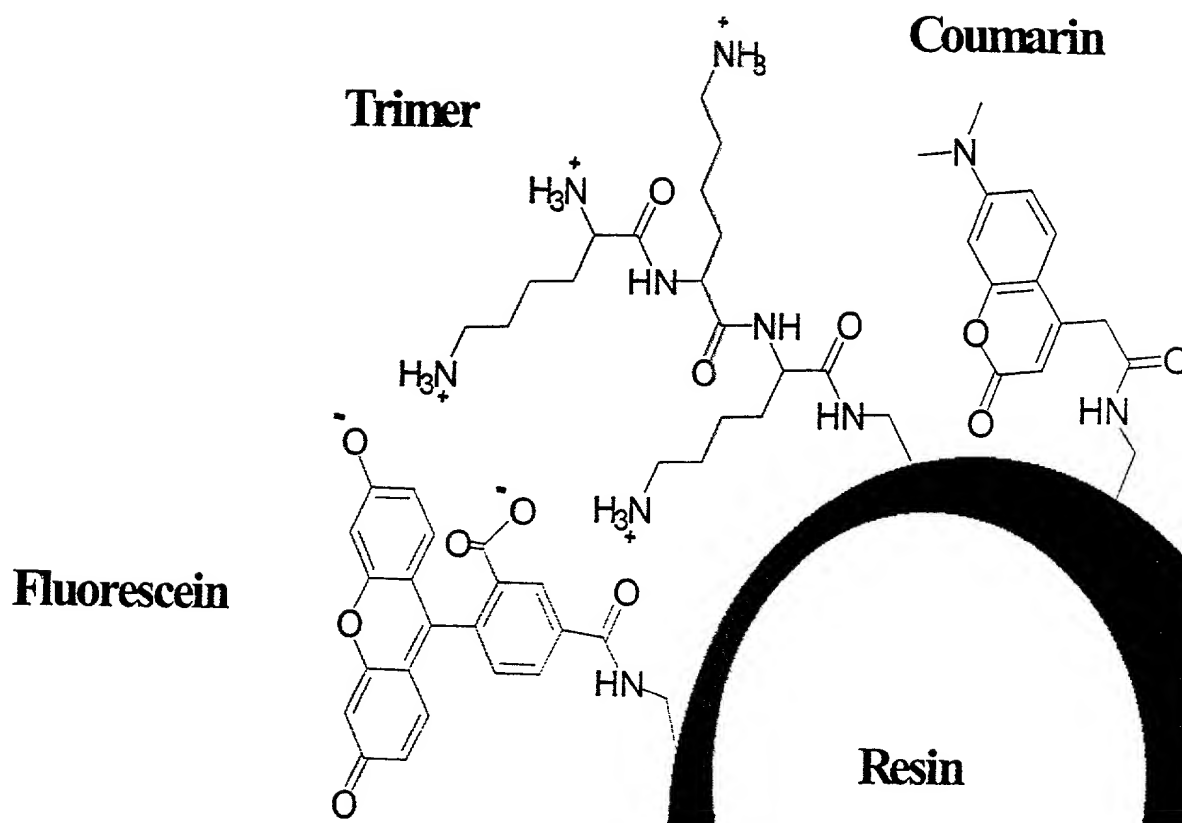


FIG. 56

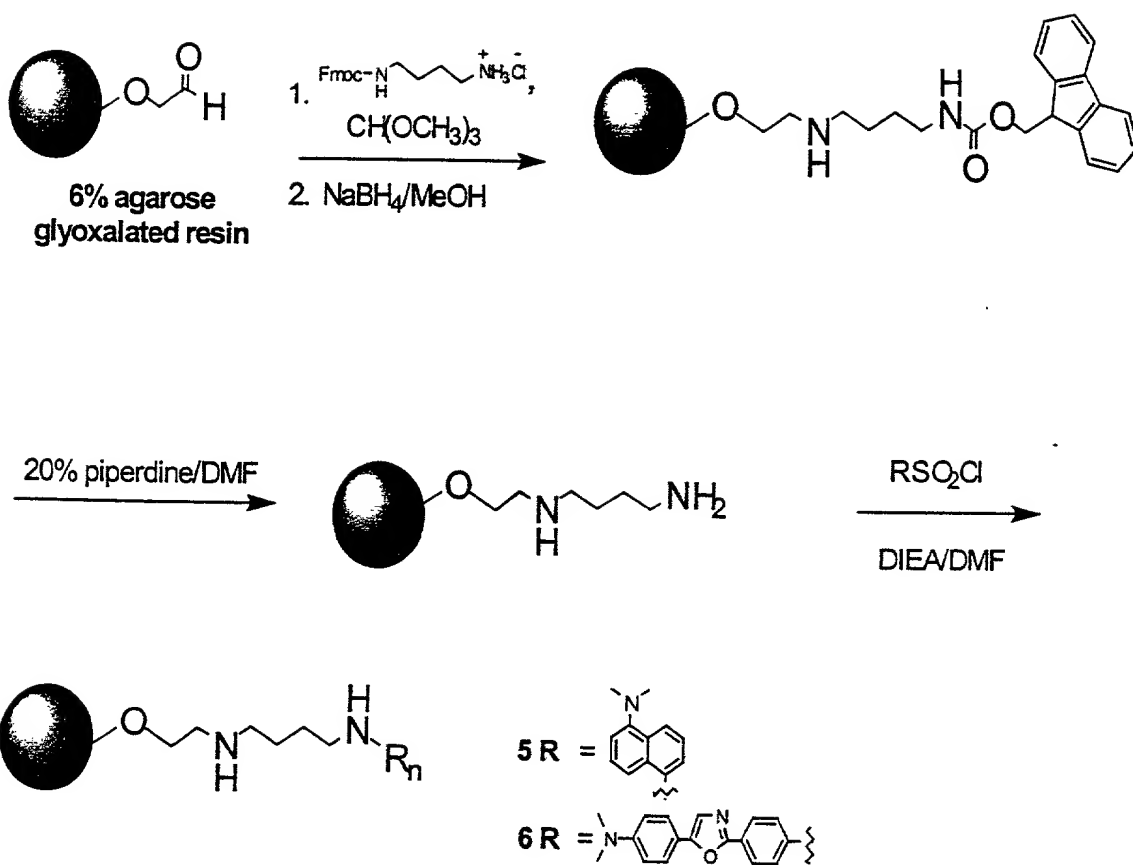


FIG. 57

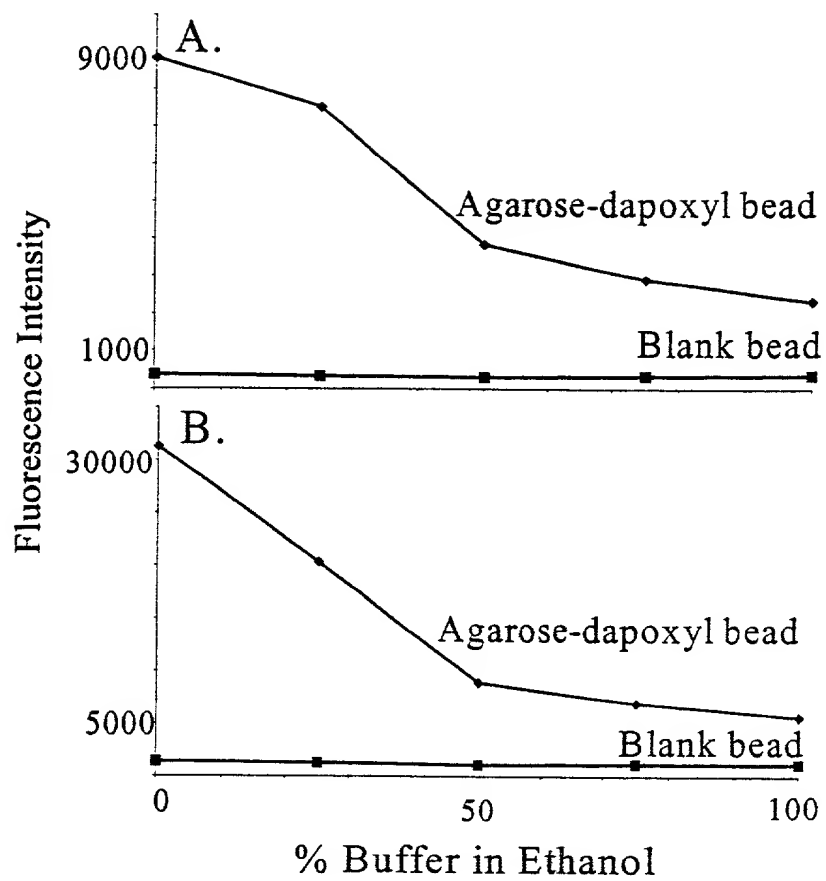


FIG. 58



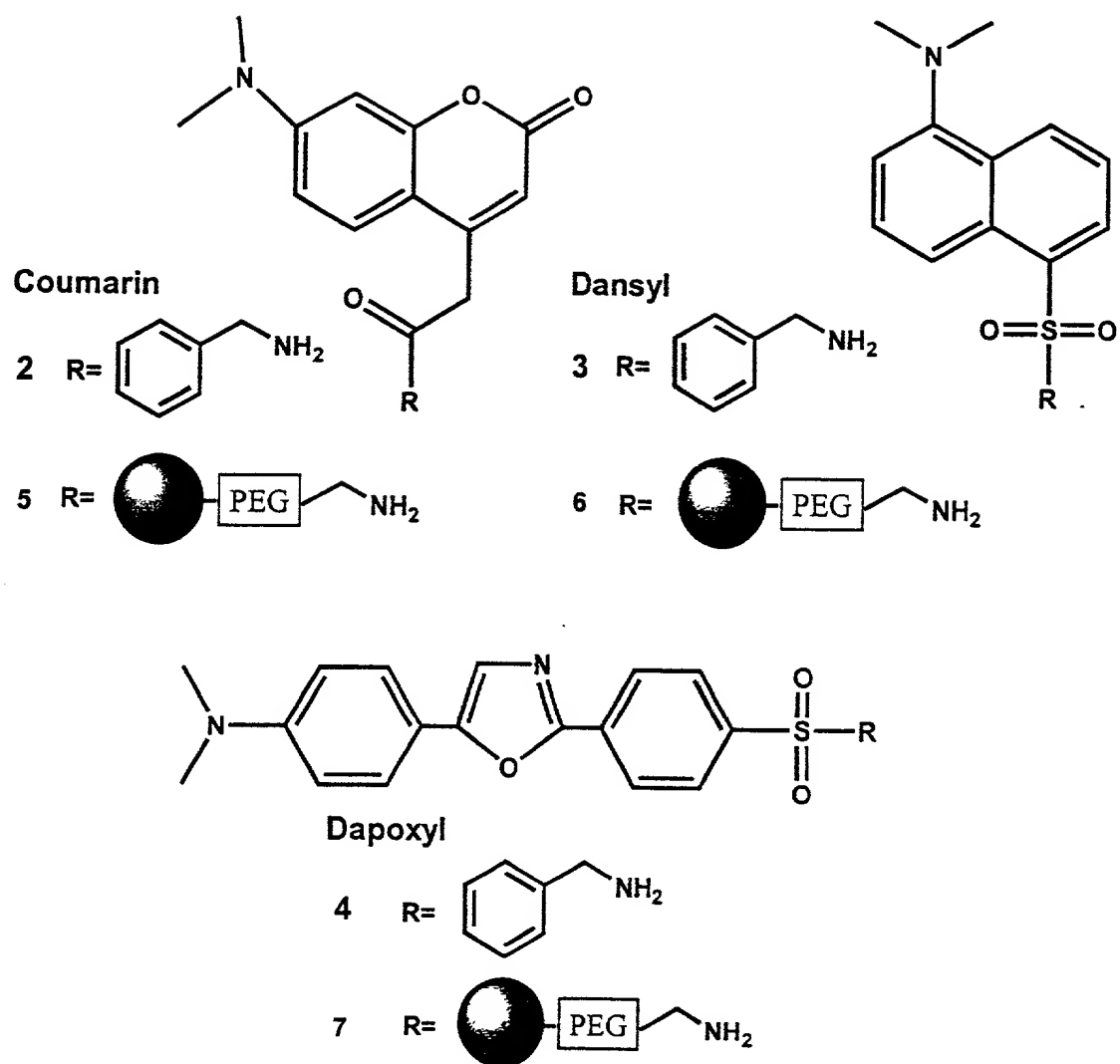


FIG. 59

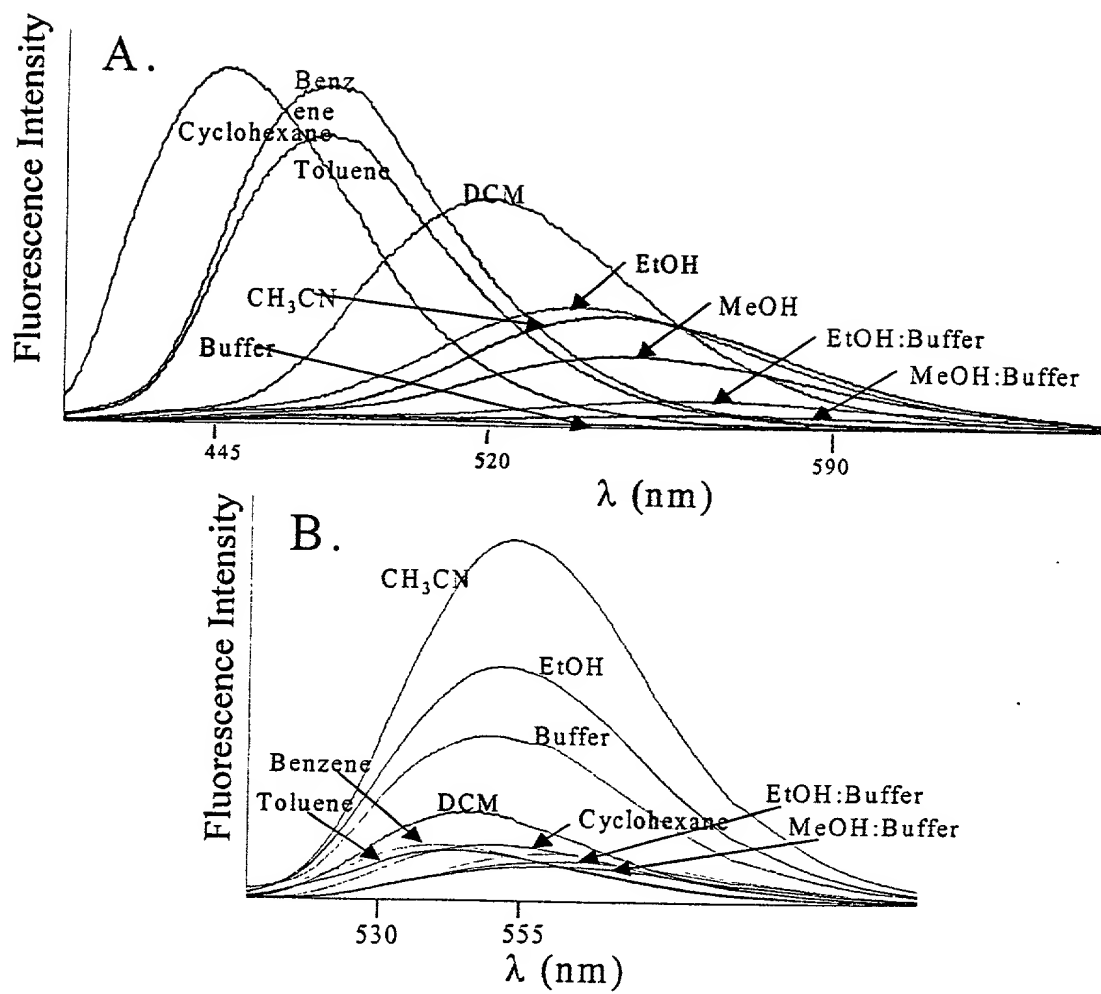
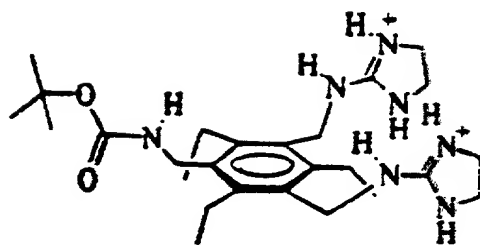


FIG. 60



1

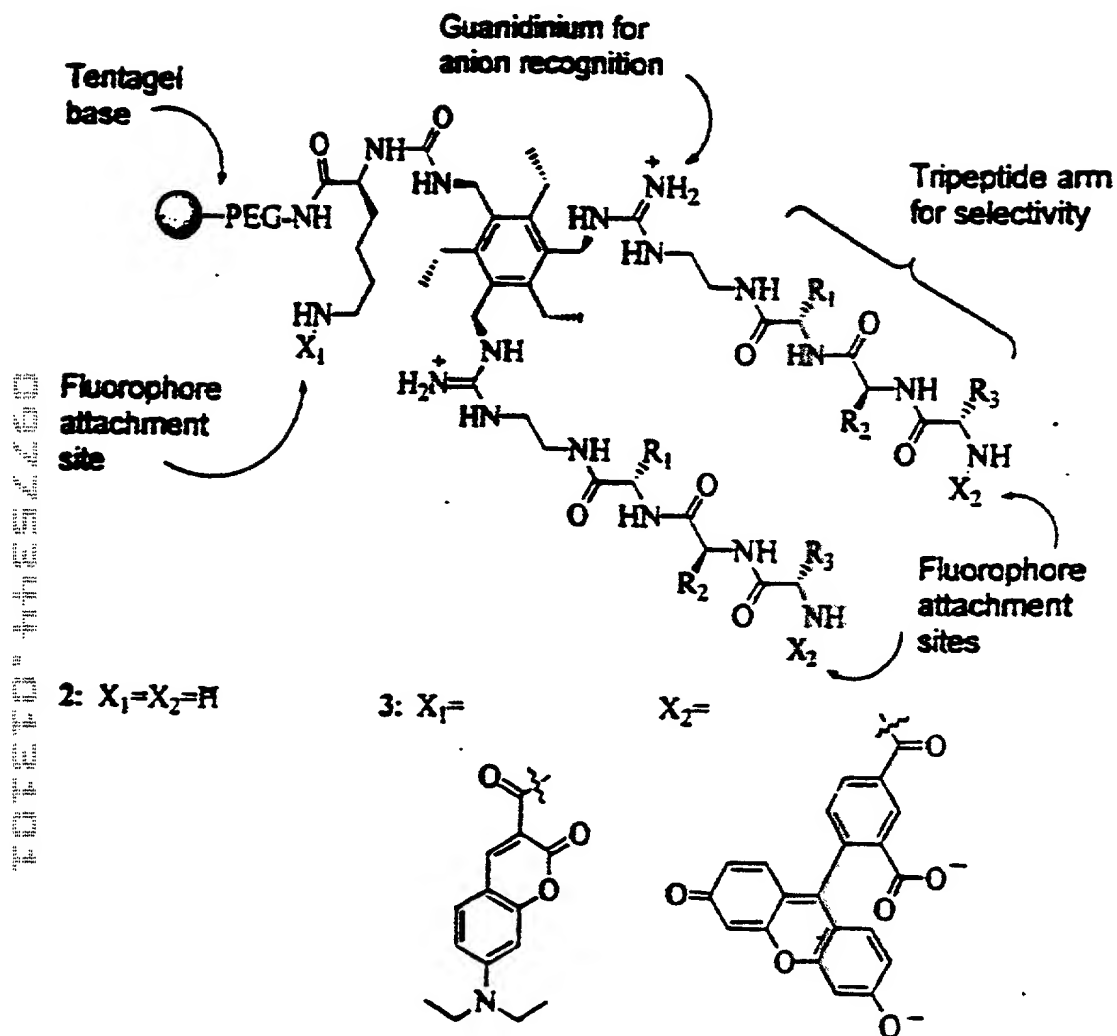


FIG. 61

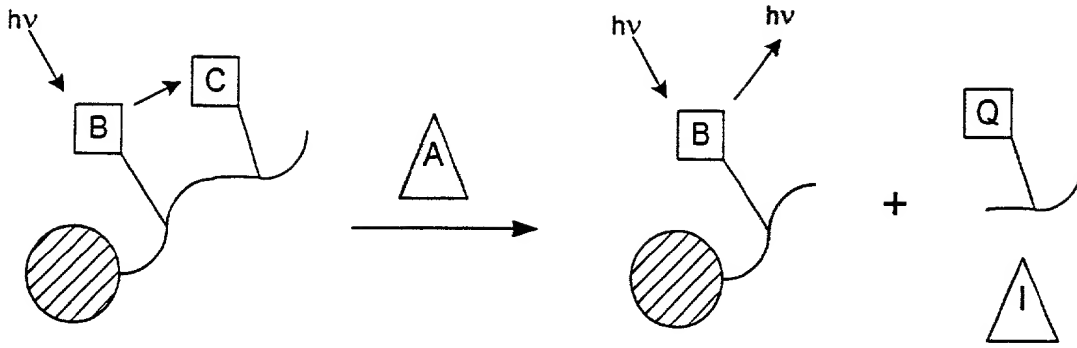


FIG. 62A

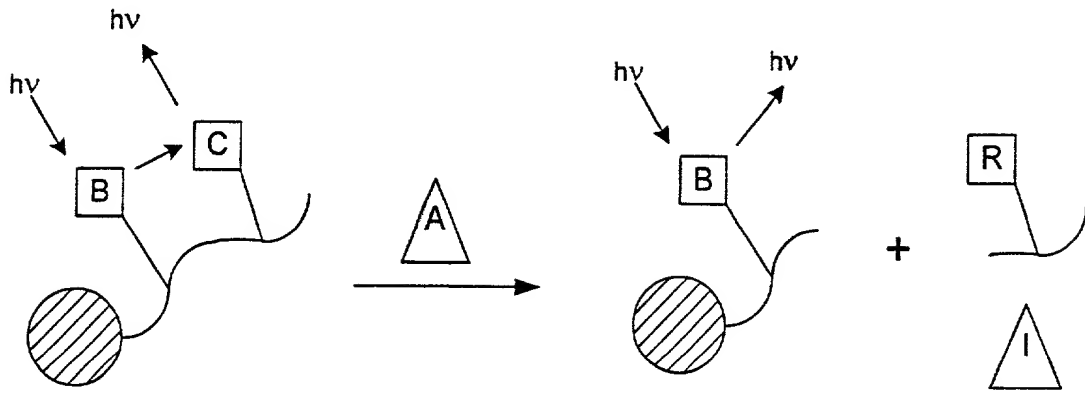


FIG. 62B

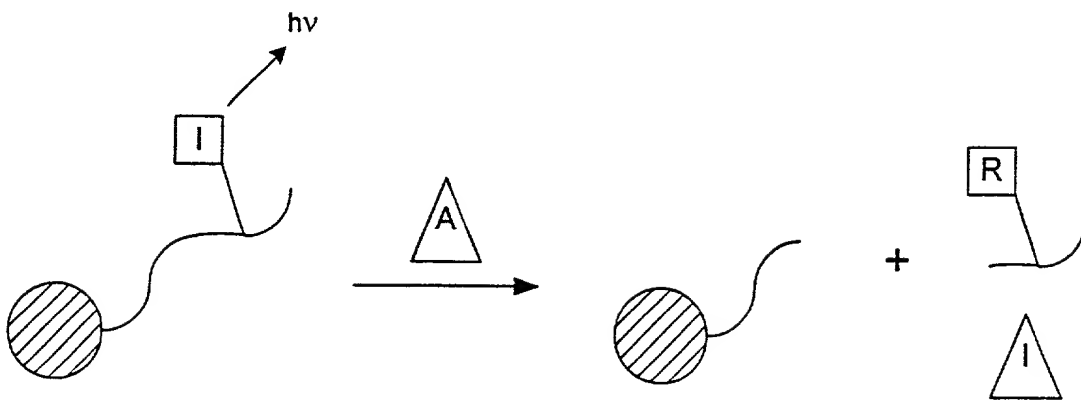


FIG. 62C

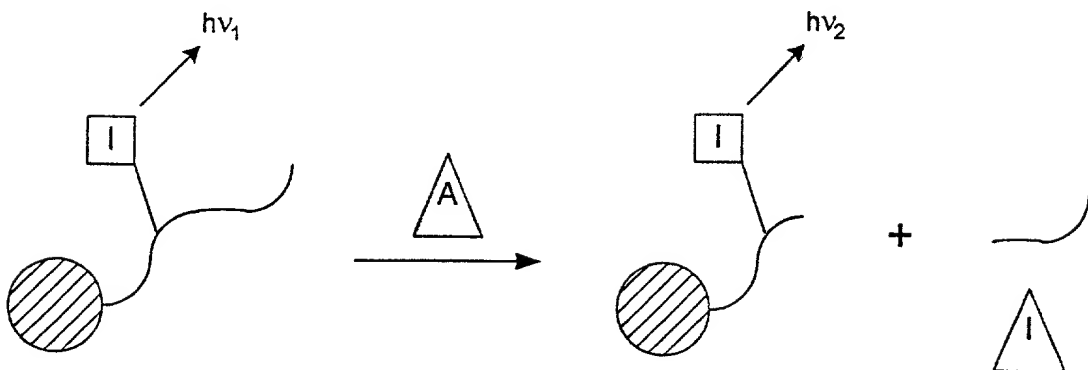


FIG. 62D

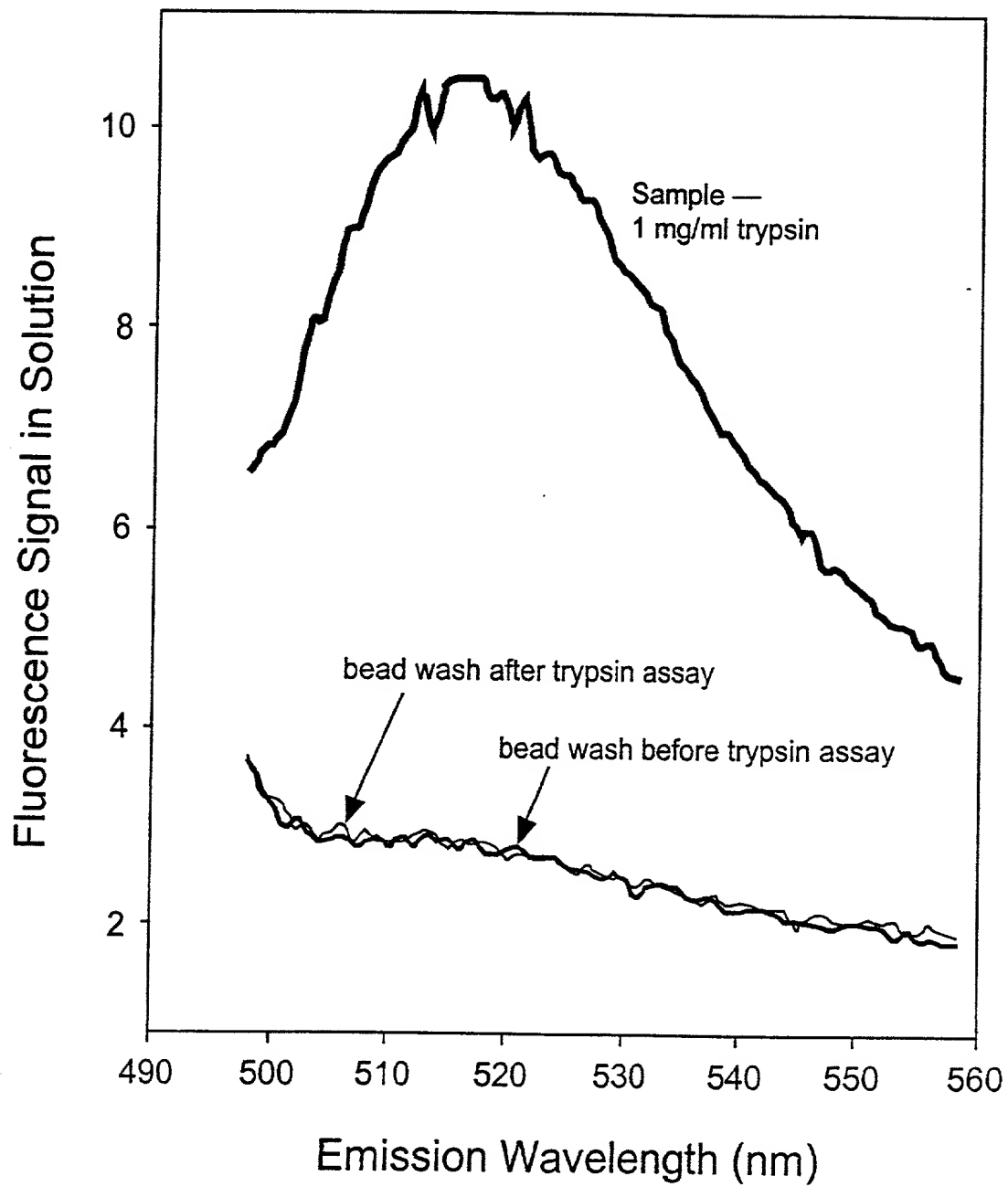


FIG. 63

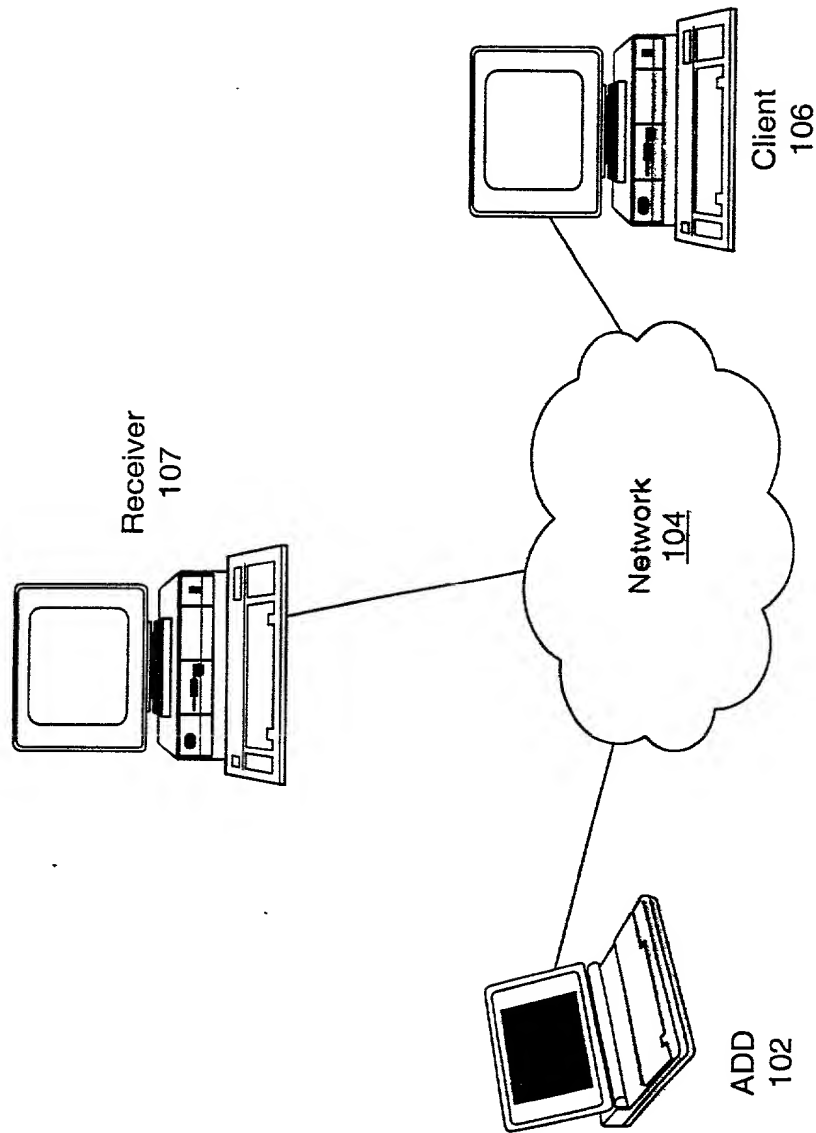


FIG. 64

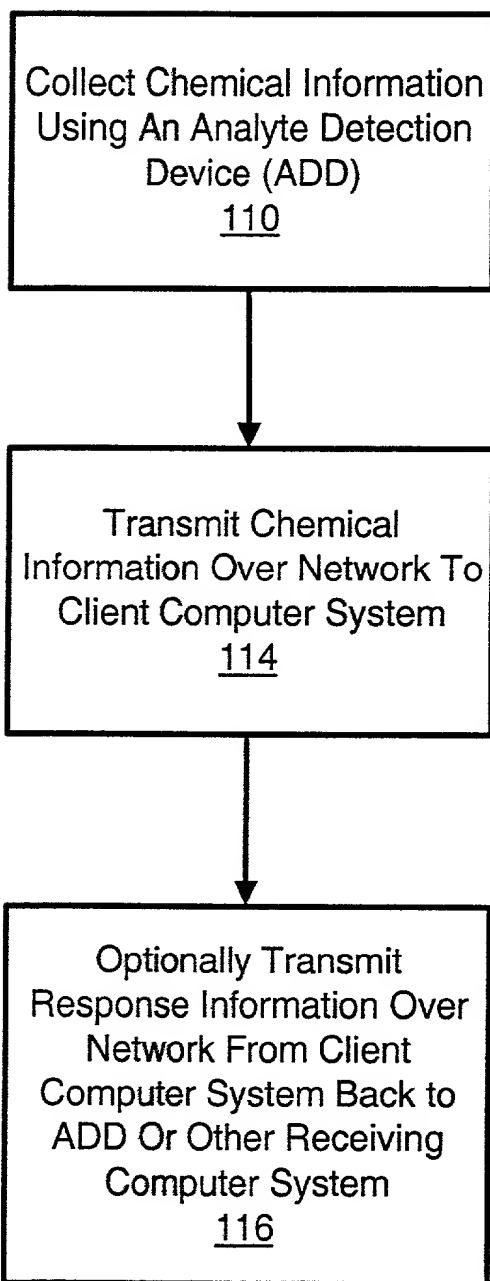


FIG. ~~55~~ 65

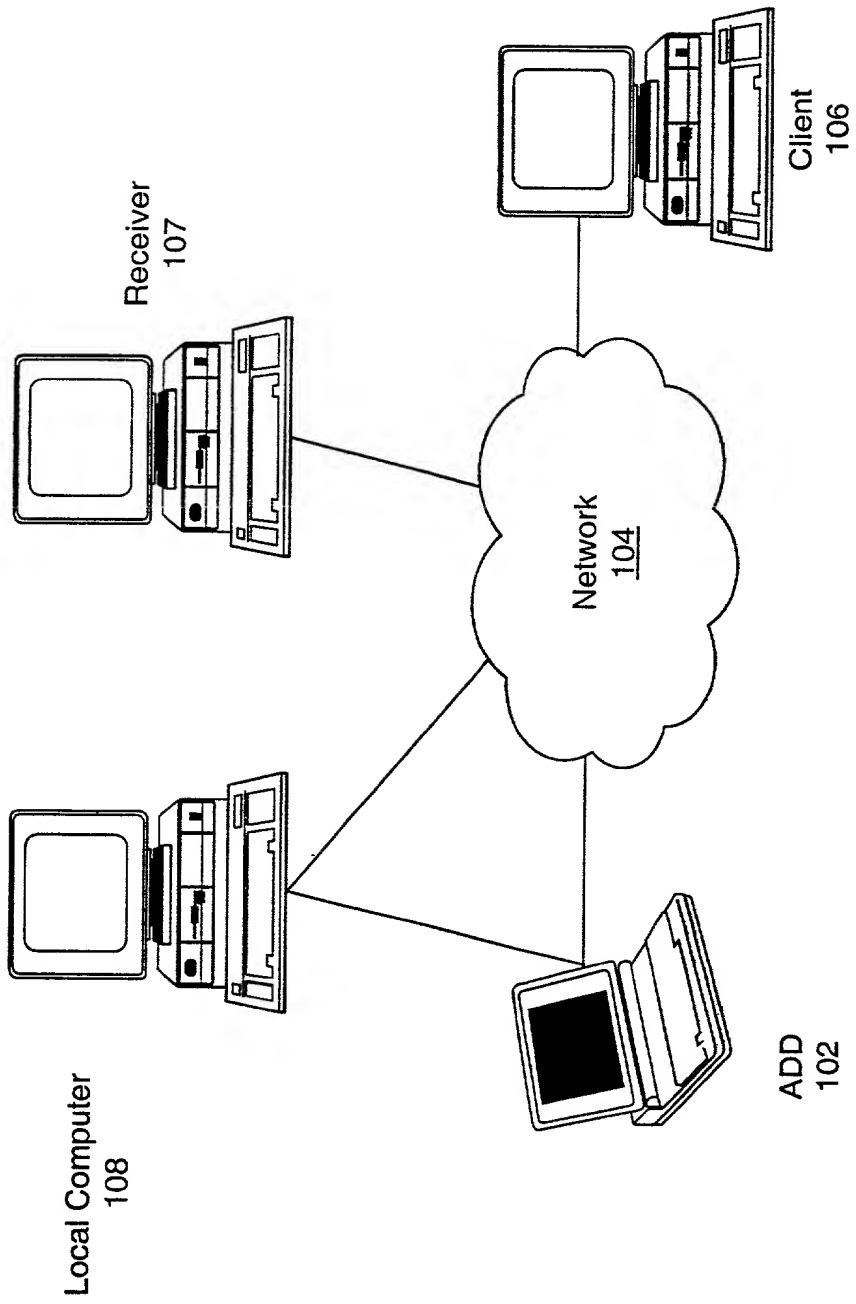


FIG. ~~55~~ 66



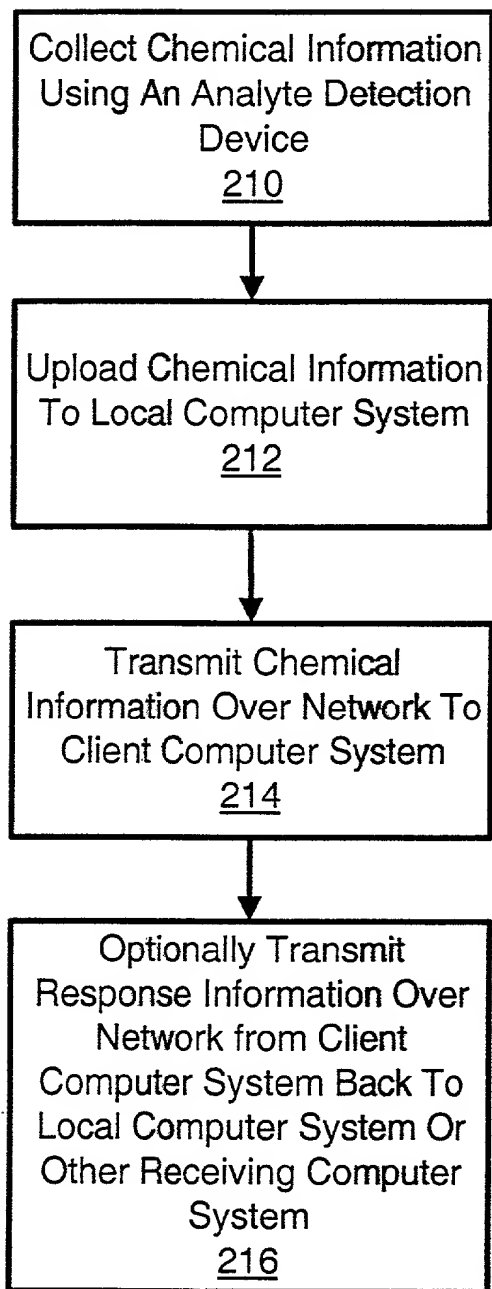


FIG. 67

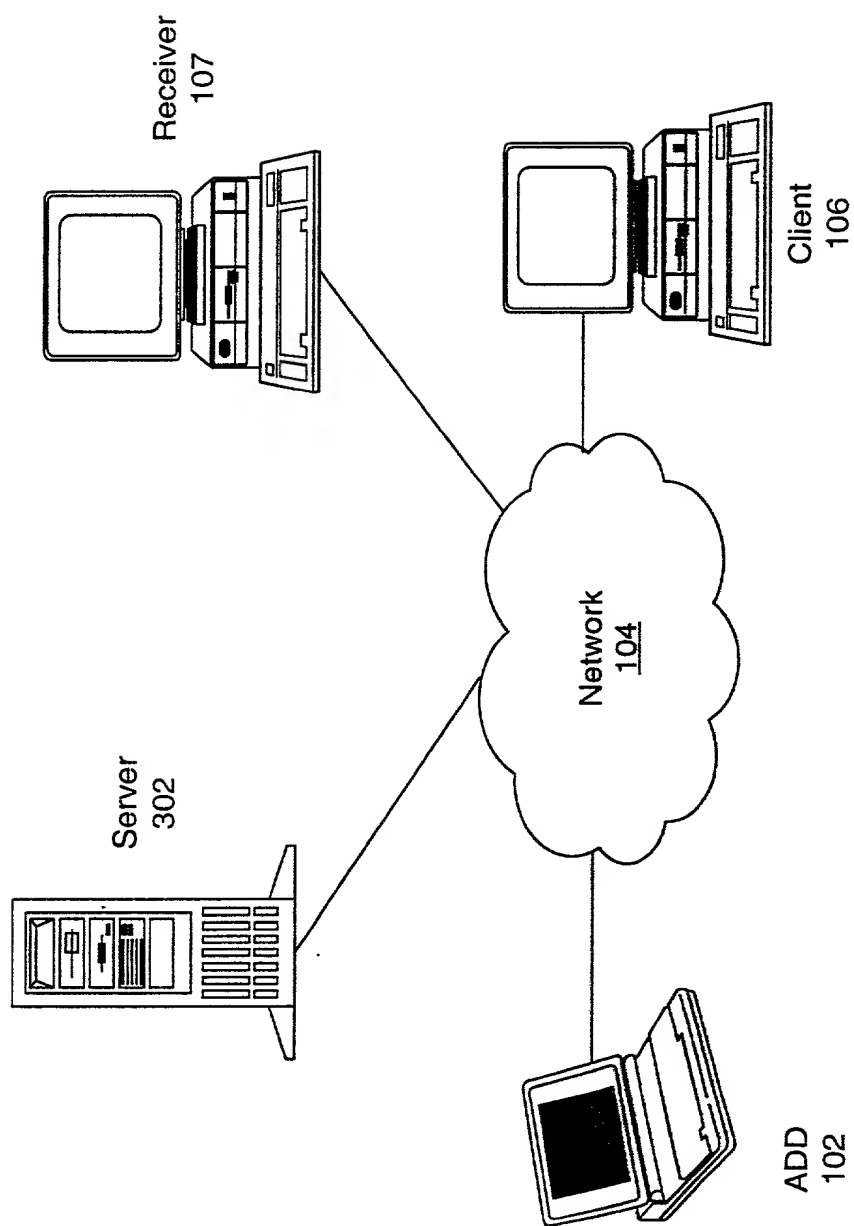


FIG. 68

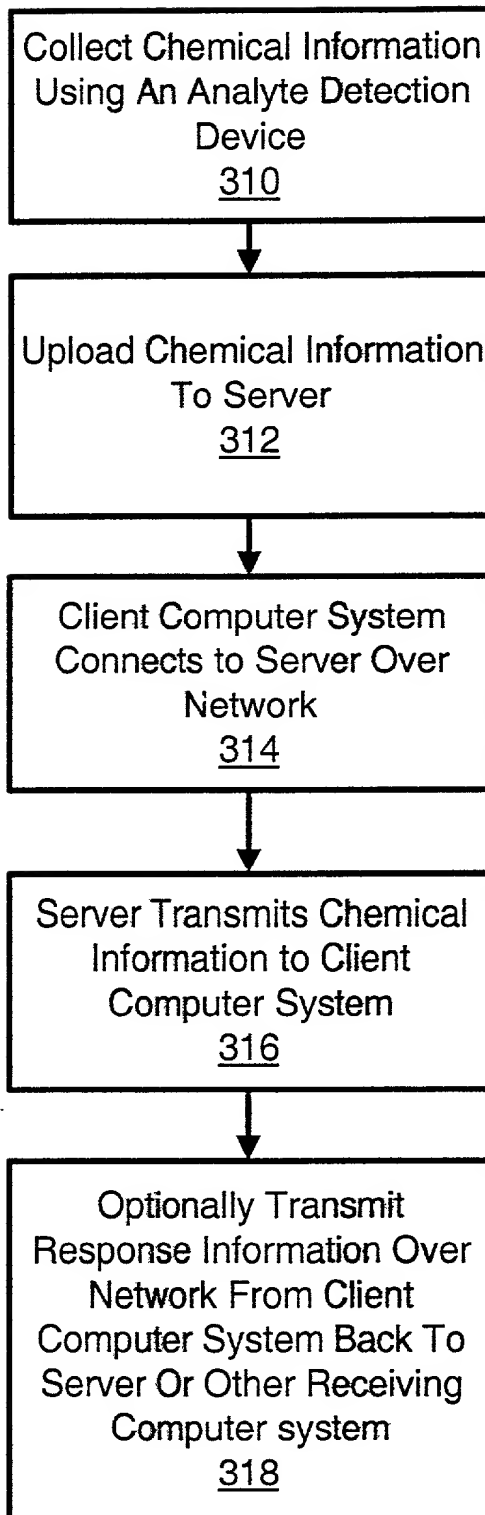


FIG. 69

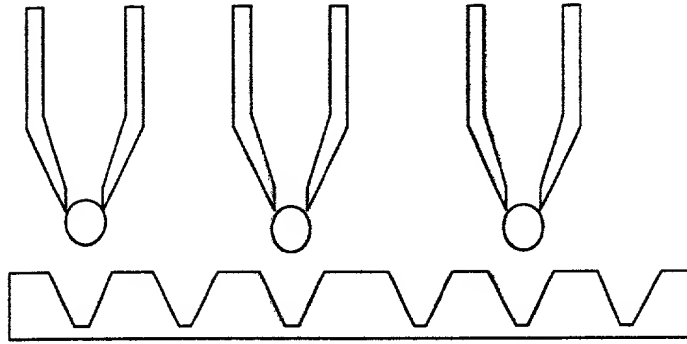


FIG. ~~57A~~ 70A

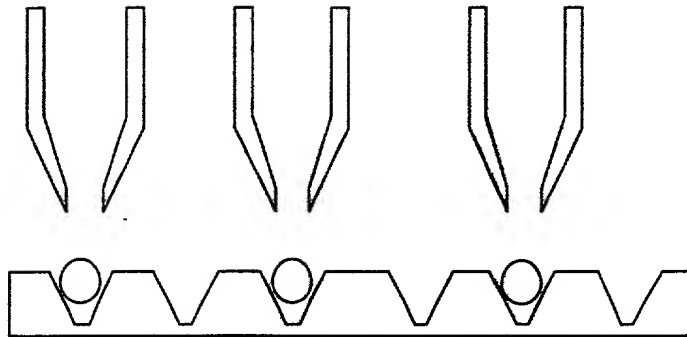


FIG. ~~57B~~ 70B

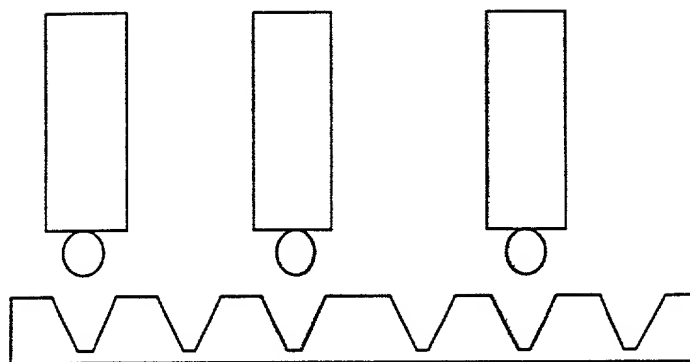


FIG. 507 71A

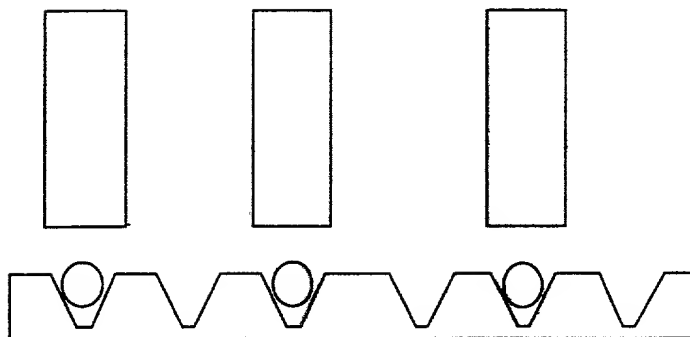


FIG. 508 71B

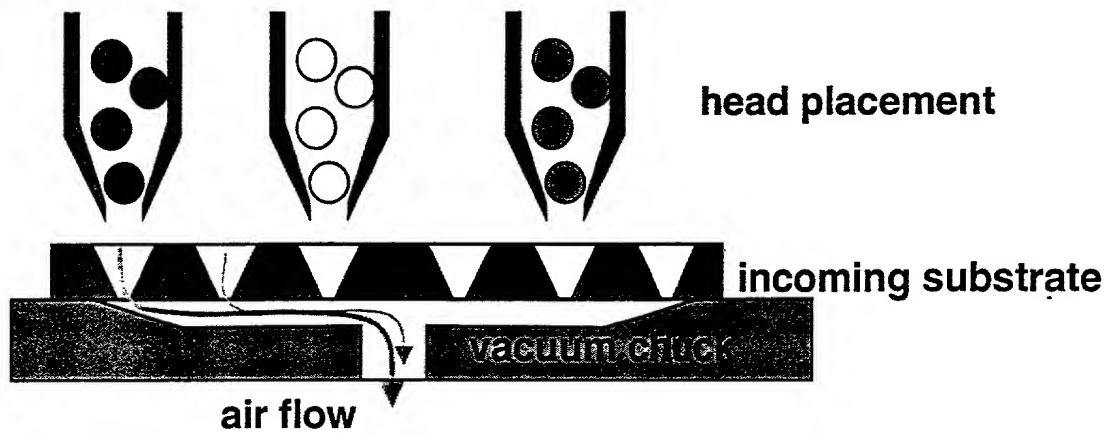


FIG. ~~72~~ 72A

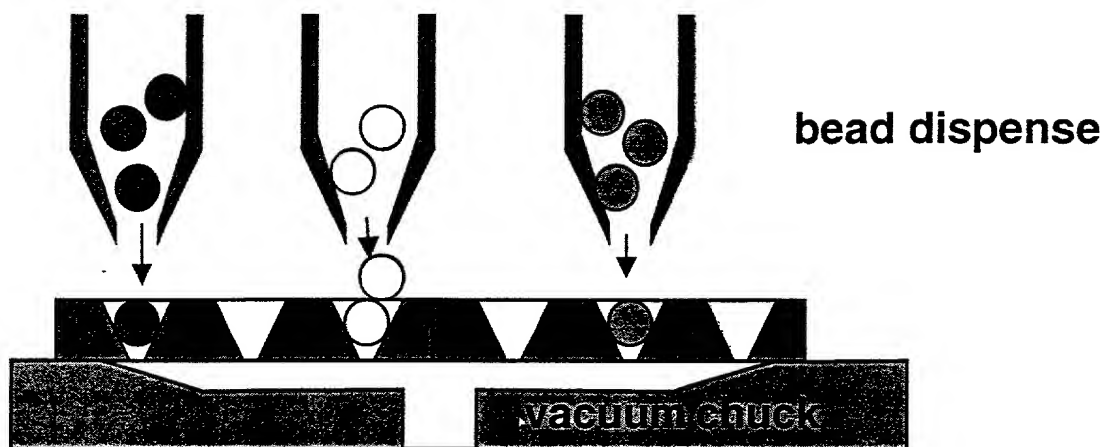


FIG. ~~72~~ 72B

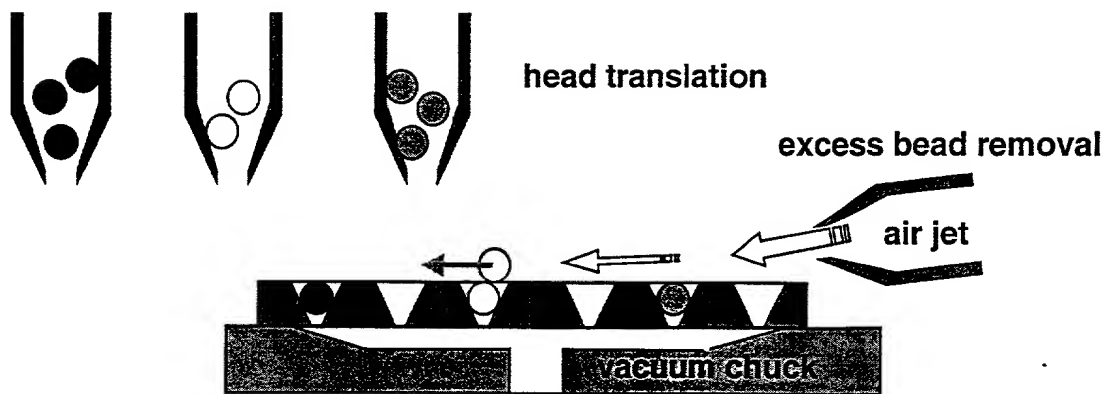


FIG. 592 72C

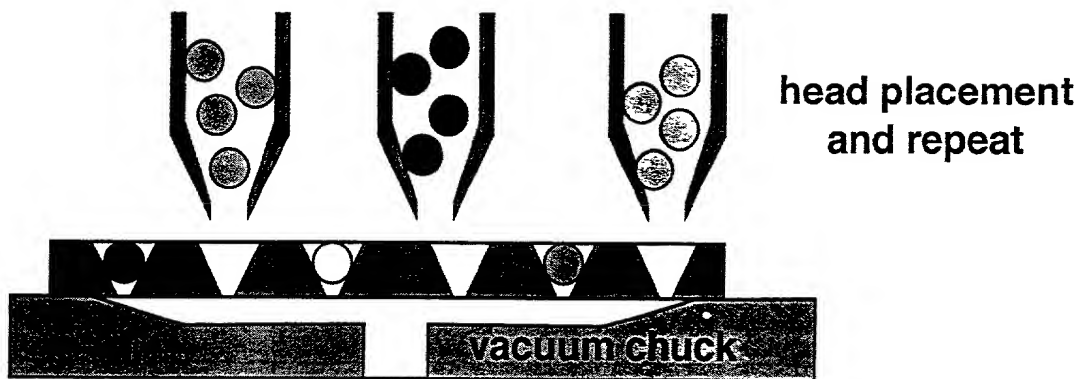


FIG. 593 72D





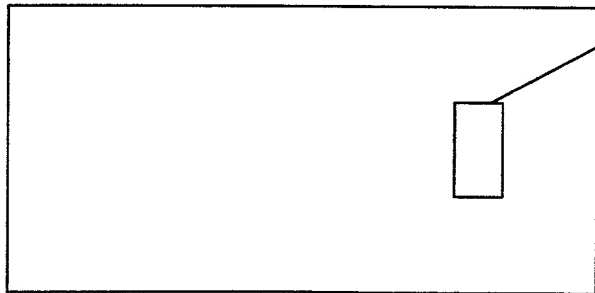


FIG. 50A  
75

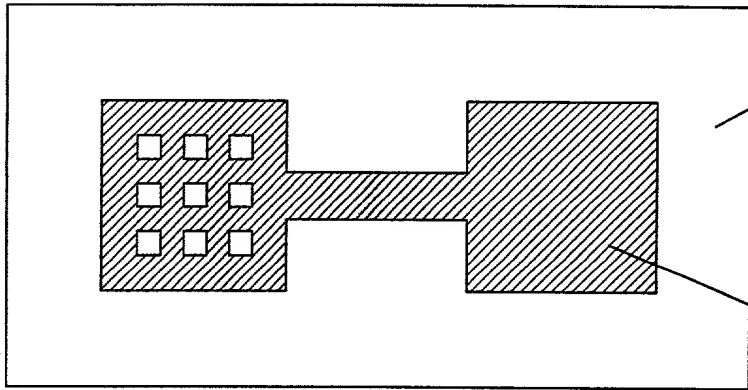


FIG. 50B  
75

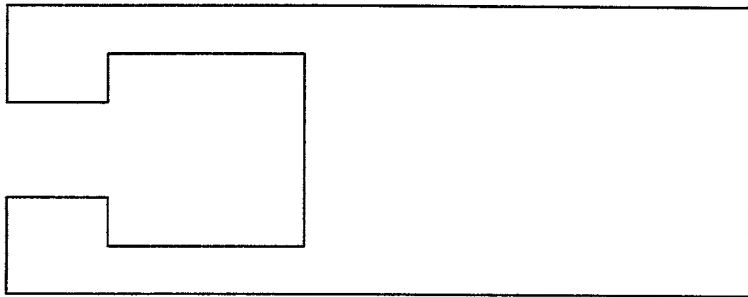


FIG. 50C  
75

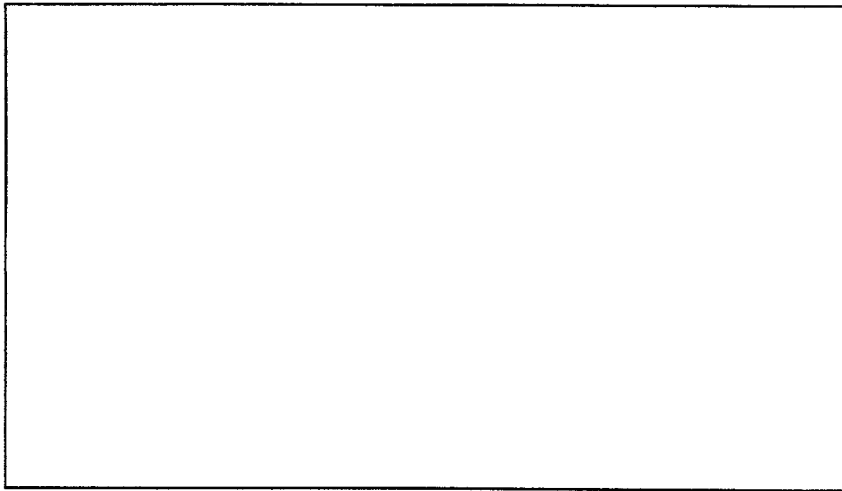


FIG. 50D  
75

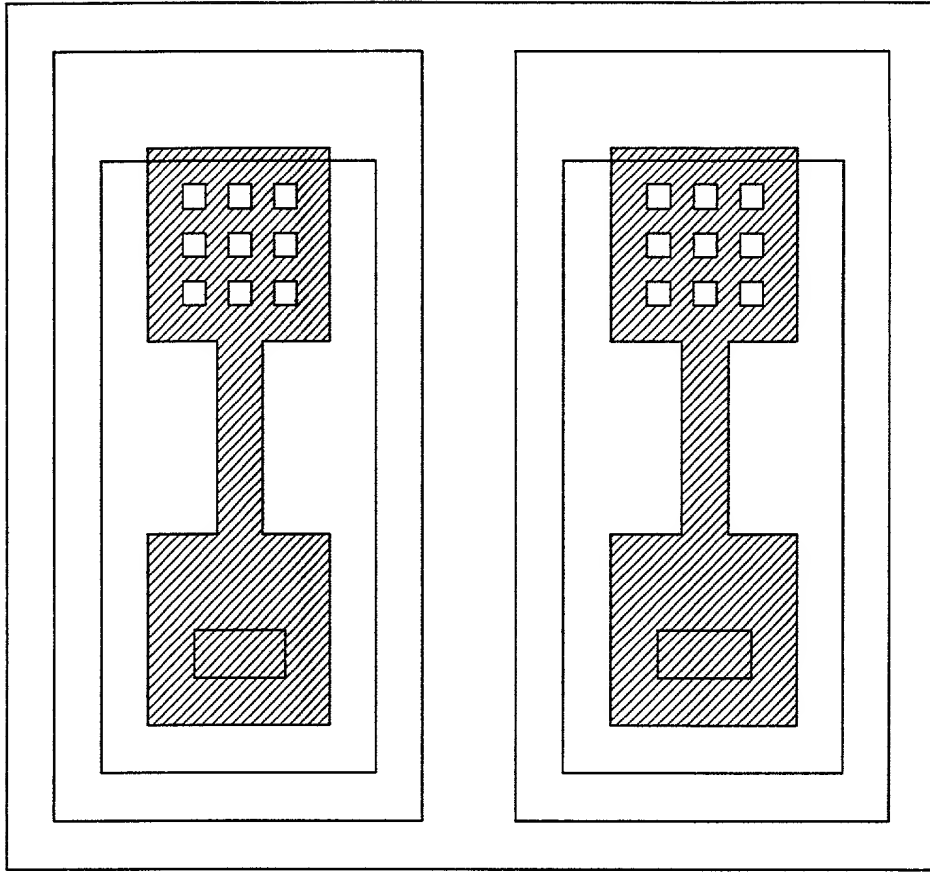


FIG. 76



FIG. 78 is a perspective view of a control panel 1010 in accordance with one embodiment of the present invention. The control panel 1010 includes a display 1014 and a plurality of buttons 1012 arranged in a grid. The control panel 1010 is mounted on a base 1050. The control panel 1010 includes a top surface 1020 and a side surface 1022. The control panel 1010 includes a top edge 1030 and a bottom edge 1040. The control panel 1010 includes a front edge 1050 and a back edge 1050.

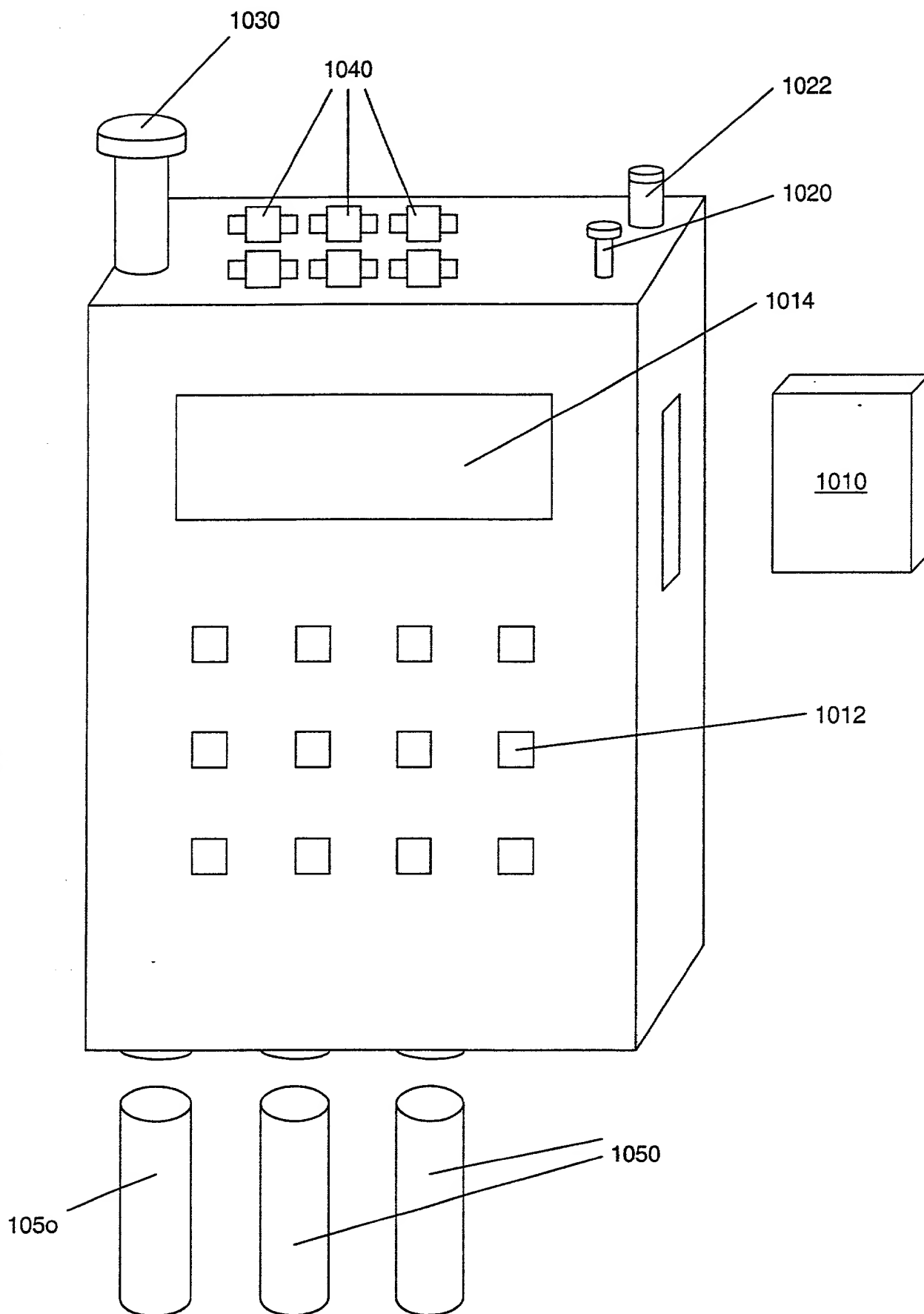


FIG. 78

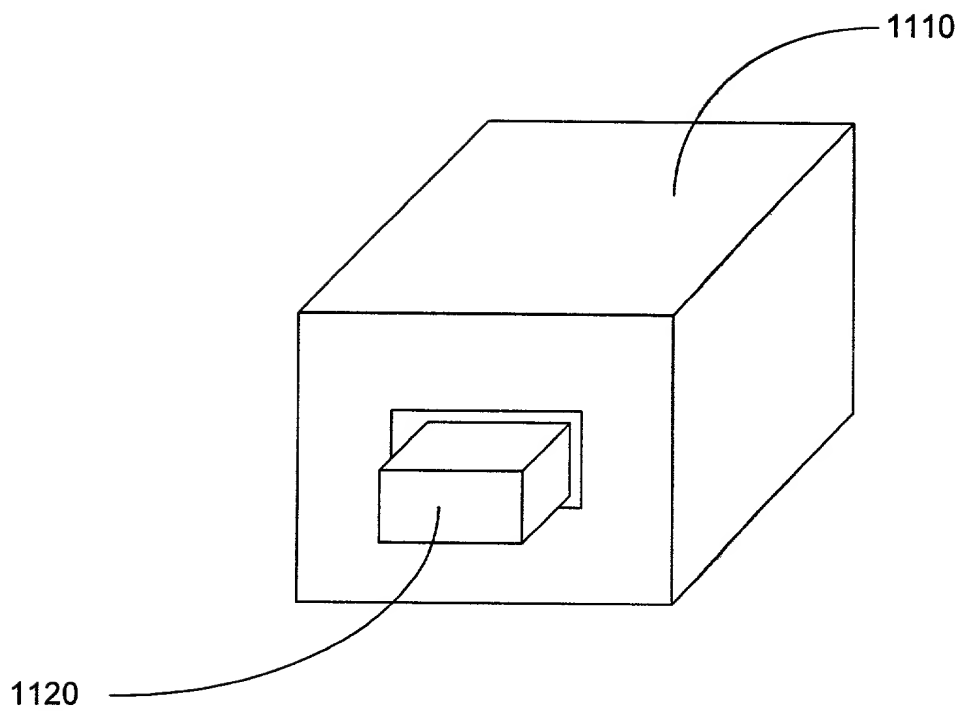


FIG. 79A

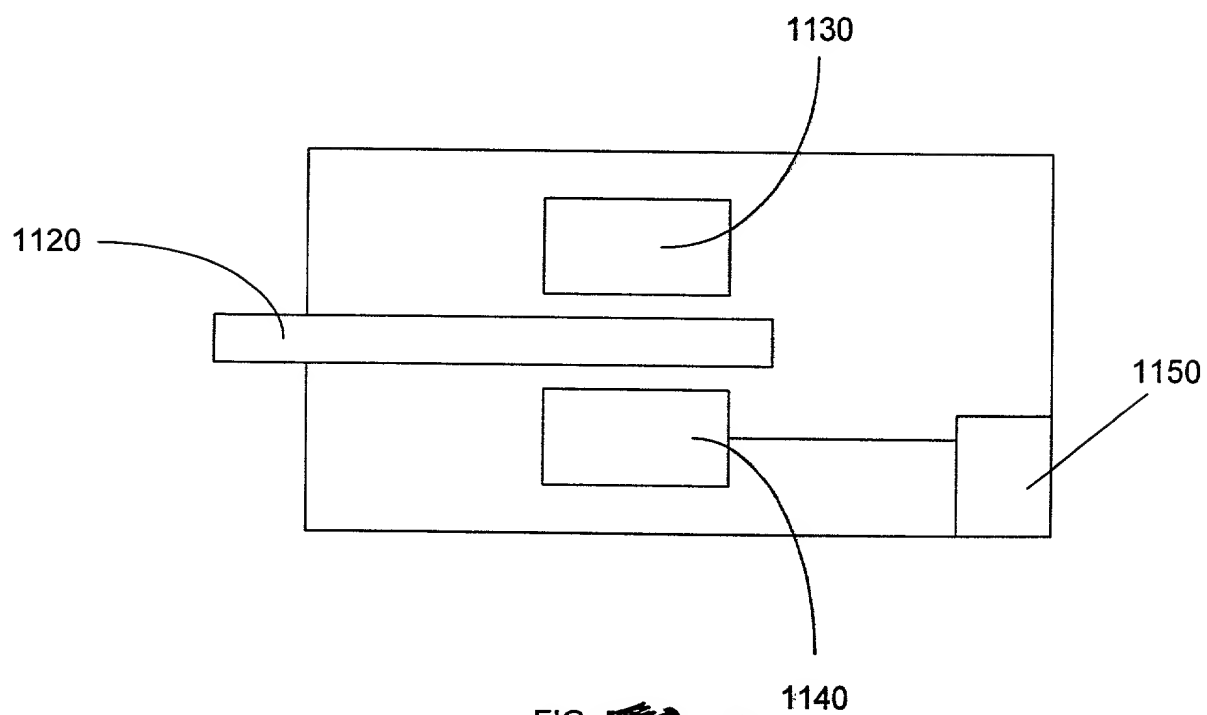


FIG. 79B

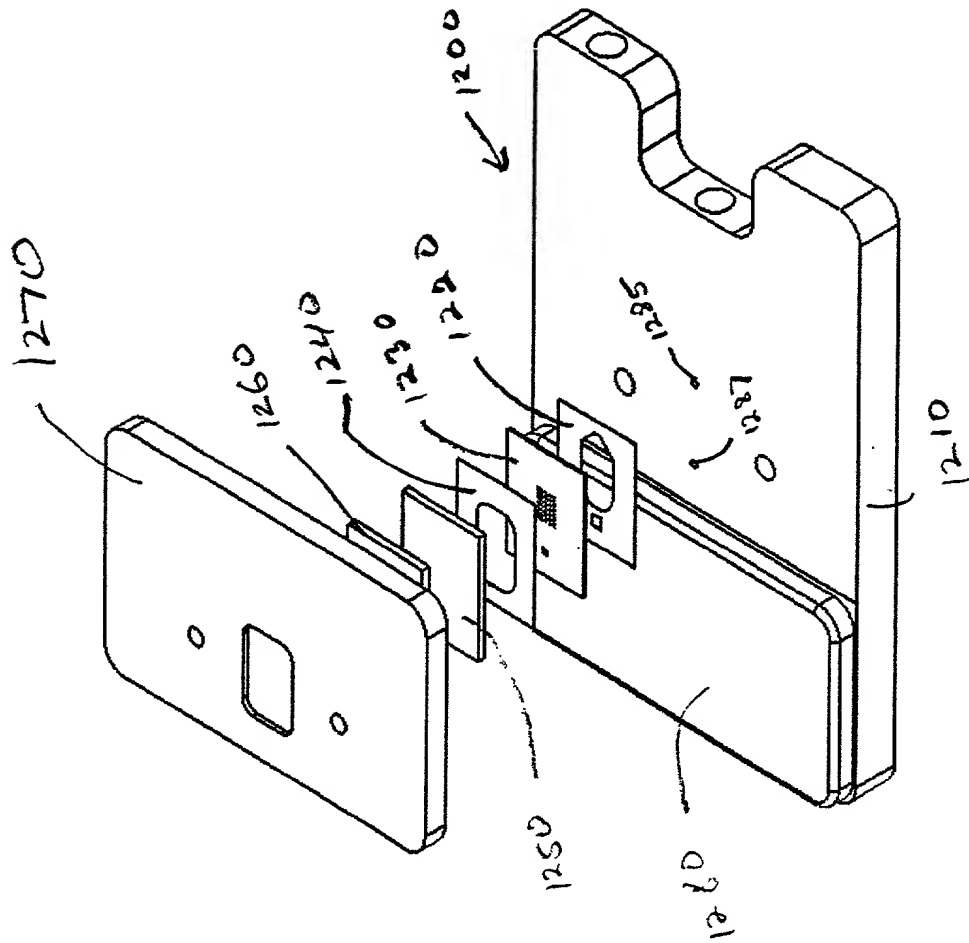


FIG. 80

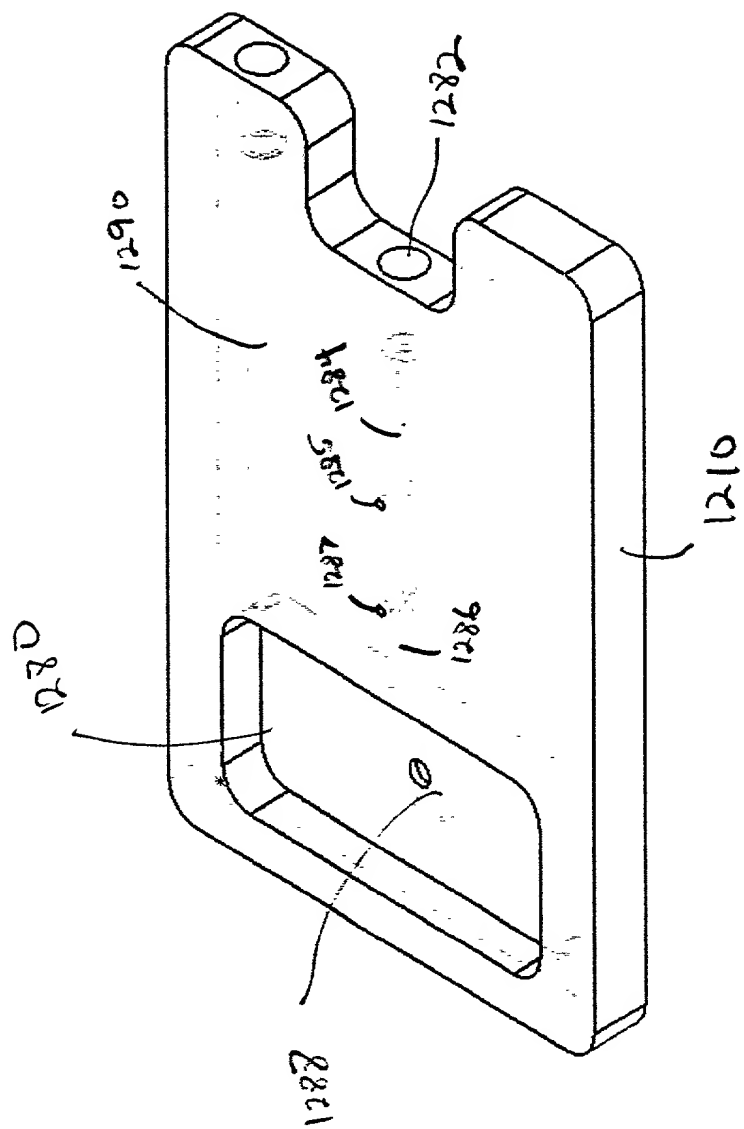


FIG. 81

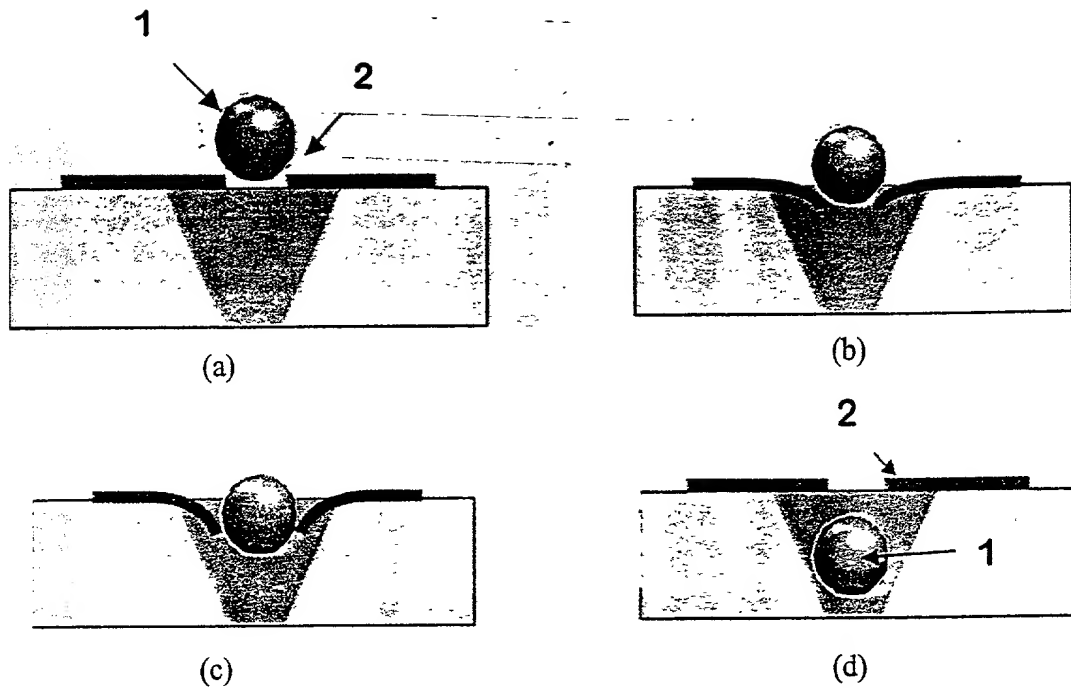


Figure 82